REPORT

OF

THE DEPARTMENTAL COMMITTEE

APPOINTED BY

THE BOARD OF AGRICULTURE

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TO INQUIRE INTO

SWINE FEVER:

WITH

MINUTES OF EVIDENCE, INDEX, AND APPENDICES.

PART II.

MINUTES OF EVIDENCE, APPENDICES, AND INDEX.

Presented to both Houses of Parliament by Command of Her Majesty.

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MINUTES OF EVIDENCE.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE DEPARTMENTAL COMMITTEE

ON

SWINE FEVER.

FIRST DAY.

Thursday, 2nd March 1893.

At 7, Whitehall Place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

SIR WILLIAM S. B. KAYE, C.B., *Q.C.*
SIR JACOB WILSON.
PROFESSOR G. T. BROWN, C.B.
MR. R. G. WARDLAW RAMSAY.
MR. ALEXANDER SHAW.
MR. JOSEPH SMITH, JUNR.
MR. T. CARRINGTON SMITH.
MR. CLEMENT STEPHENSON.

MR. FRANCIS A. FULFORD, *Secretary.*

Professor WILLIAM DUGUID, called; and Examined.

Professor William Duguid.

2 March 1893.

1. (*Chairman.*) YOU are Assistant Inspector of the Board of Agriculture?—Yes.

2. In that position you have naturally given a great deal of attention to the question which, as you know, is the subject of the present inquiry?—Yes, for the last 15 or 16 years I have paid particular attention to that and other contagious diseases.

3. Now will you give us a short sketch of the condition of affairs before any legislation took place in regard to swine fever?—Little or nothing was known of swine fever in this country until about 1862 to 1865. In 1862 Professor Simmonds described or gave a report on a serious swine disease in Berkshire with diseased conditions of the intestines which we find similar to what we now call swine fever. In 1865, the late Dr. Budd of Bristol, while investigating typhoid fever in the human subject, met with cases of a similar kind amongst pigs, and described it as typhoid fever. In 1864, several outbreaks of swine fever were recorded in Berkshire, in Wiltshire, and other parts of the West of England, but it was never known until 1879, when statistics were collected, to what extent the disease had spread. From my own personal knowledge, in 1876 the disease appeared in Aberdeenshire, and likewise in other parts of Scotland. In that same year a serious outbreak of the disease occurred in Leicestershire amongst a large herd of pigs at a cheese factory at a place called Beeby near Leicester. Nothing was really done to prevent the spread of the disease until 1878, when it was made a disease under the Contagious Diseases (Animals) Acts. No statistics were collected until then, and no one really knew the extent to which the disease had spread in the country.

4. Now what were the first steps taken?—The first steps taken were to make the swine-fever a disease under the Contagious Diseases (Animals) Act, 1878, by certain sections of the Act; that was to say, giving notice of the existence of disease, slaughter of and compensation for the diseased swine, and restriction of movement of other swine out of the place where the disease existed, with, of course, right of entry for inspectors; and other sections of the Act necessarily followed.

5. Will you go on to tell us what the effect of this legislation, and the Orders issued under it, was in the immediately succeeding period?—In the first year statistics were collected; returns were received from 53 counties in Great Britain; 2,765 outbreaks were

Professor William Duguid.

2 March 1893.

recorded, and 17,074 pigs were attacked. The next thing that occurred was that in July 1879 the compulsory slaughter of the diseased was continued, and slaughter of the contact pigs by the local authorities permitted. That was continued, and in 1880 the number of infected counties was reduced by three, namely, down to 50; the outbreaks were reduced to under 2,000, namely, 1,936; and the number of swine attacked recorded is 9,865, as compared with 17,000 in the previous year. In the following years, 1881, 1882, 1883, and 1884 the number of infected counties ranged from 54 to 56, and the outbreaks from 1,700 to 2,983, and the swine attacked ranged from about 7,900 up to 14,763. During this period it was not the legislation for swine fever alone that was beneficial. In those years foot-and-mouth disease existed in this country, and the regulations applying to foot-and-mouth disease naturally extended to pigs, who are susceptible to that disease, and therefore movement of pigs during those years was to a very great extent restricted.

6. You consider that that had at once a very important effect?—It had a very important effect, as as well as the swine fever regulations, strictly speaking, that were in force; the two combined produced an effect on the disease during those years.

7. (*Sir Jacob Wilson.*) Up to 1884 was that?—Yes, up to 1884. From 1881 to 1884 the foot-and-mouth disease regulations were in force in many parts of the country, and the exposure of swine for sale in markets was prohibited except for slaughter within two or three days.

8. (*Mr. Carrington Smith.*) It was very marked in my own county, and our chief superintendent has made a note to about the same effect as your evidence?—It was noted by anybody who paid any attention to the figures at that date.

9. (*Chairman.*) There was a large increase, was not there, for a time in 1882?—Yes, there was. There was an increase which we could not quite account for at the time. The increase, I think, in that year was partly due to this, we had in 1882 a considerable increase in Wales. The outbreaks in Wales that year, in 1882, rose from 75 in 1881 to 297; and I may mention as a fact, that in Wales very little or no foot-and-mouth disease ever existed, and that the foot-and-mouth disease regulations were not in force there.

10. Perhaps it would be convenient if you would just give us the titles and substance of the different Orders which were made between 1879 and the date which you have mentioned. I think there were several Orders issued during that period, we had better get those in evidence, I think?—In 1879 the compulsory slaughter of diseased swine was continued and the slaughter of contact pigs optional. Then, in addition to that regulation, power was given by the Privy Council to local authorities to regulate markets if asked for. Several local authorities made application, and were authorised to stop movement of pigs in their own district so far as sales were concerned. The result of that was that the disease decreased in those districts, but increased in the surrounding neighbourhoods, the pig dealers moving their pigs to markets that were open instead of taking them into their own districts, where they could not expose them publicly for sale. Then in 1879 also, there was the Animals Order, No. 523, and that was a continuation really of the former legislation. In 1882, for the first time, areas were declared for swine fever. Previously there had only been places declared infected, and movement was restricted only from those places; but, in 1882, the Order gave powers for areas to be declared, if asked for by the local authorities, and the local authorities were likewise empowered to make regulations to prohibit or regulate the movement of pigs into their own district from other districts.

11. That is the Order of July 12, 1882, No. 1,604, is it not?—Yes.

12. Now let us pass to the year 1883?—In 1883 there were 53 infected counties, 2,400 outbreaks, and 11,225 swine attacked. In 1883 we had a reduction in the number of outbreaks in England, but an increase in the number of fresh outbreaks in Scotland. As to the fresh outbreaks in Scotland, the increase amounted only to 14; in Wales the decrease amounted to 45, and in England the decrease amounted to 442. The cause of this decrease appears to be chiefly that in 1882 local authorities were given power to regulate movement into their districts; several local authorities availed themselves of that power, and prohibited the movement of pigs into their district from every district surrounding them that was infected.

13. Therefore that again pointed to the fact that, so far as legislation and the Orders under the Acts of Parliament were effective, it was in proportion as they restricted the movement?—Quite so. By the restriction of movement more good has been done than by any other means.

14. Now let us pass to 1884?—In 1884 the same number of counties remained infected in England as in 1883, and the outbreaks decreased by about 450, and the swine attacked by about 8,573. In Wales there was a decrease of exactly half in the number of outbreaks, and the number of swine attacked decreased from 467 to 161. In Scotland there was an increase in outbreaks from 29 to 33. Now, though the same swine fever legislation was in force in Scotland at that time, Scotland had no foot-and-mouth disease, which would probably account for the spreading there and the decrease in England.

15. You mean that in Scotland there was no restriction on account of the foot-and-mouth disease, and then the disease began to increase?—It appeared to increase there then.

16. Then that again is another argument in favour of showing that every restriction of movement seems to check the disease?—Yes; it seems to check the spread of the disease.

17. Notwithstanding the slight diminution in 1884 it is the fact, is it not, that complaints began to be general about that time from local authorities, who pointed to the inutility of the measures adopted, on the ground that they varied from district to district so much that the general object of the Act was to a great extent defeated, and modifications were asked for in consequence?—In July 1884 the Infected Circles Order was applied to swine fever in certain districts; that is to say, immediately a place was declared infected with swine fever, the declaration of the inspector constituted that an infected place, and then a circle for a certain distance round became an infected circle, and no movement could take place out of that; and then a wider circle or area was drawn in which movement might be permitted by licence; those were the regulations in force at the end of 1884.

18. That was, to a very great extent, in consequence of the complaints, was it not, of the local authorities that the previous state of things was not sufficient?—Yes, I believe it was in consequence of that.

19. There was an Order, was not there, also in the year 1884, revoking the order for compulsory slaughter and leaving it optional?—Yes, but previous to that there was the Animals Order of the 5th February 1884, No. 3082, providing that the cleansing and disinfection of a pigsty in which a diseased pig had died or been killed should be made a condition precedent to the infected place being declared free by the local authority.

20. The Order of May 16th 1884, as I understand, revoked the Order for compulsory slaughter of diseased swine?—Yes.

21. And left it optional on the part of the local authorities?—That is so; and then the Swine Fever (Infected Circles) Order was adopted instead, so as to prevent the movement.

22. I was coming to that. That Order was the Order of July 29th ?—Yes.

23. The Order of May 16th revoked the Order for compulsory slaughter of diseased swine, and left it optional on the part of the local authorities ?—Yes.

24. Compensation remaining the same ?—Yes.

25. The Order of July 29th provided that infected circles, one half-mile radius, being formed round any infected place, the movement of swine within the circle was stopped under certain reservations, and the local authorities were given power to reduce or dissolve a circle as they pleased ?—Yes.

26. (*Mr. Carrington Smith.*) There was a very large increase in Staffordshire from 1884 to 1885, whereas in Staffordshire, in 1884, it existed at 120 places, in 1885 it existed at 394 ; we think that attributable partly to the fact that there was no restriction of movement for foot-and-mouth disease, and partly in consequence of the Order for slaughter ceasing to be operative ?—There was a very large increase in Staffordshire, in fact, there was a very large increase in 1885 generally throughout the country.

27. (*Chairman.*) I will come to 1885 in a moment, but 1884, if I am not mistaken, was a year when there was a very serious outbreak in the New Forest ?—The outbreak in the New Forest appeared to be serious, but did not really amount to very much. It was discovered early, and the diseased pigs were killed immediately, and it never spread to any extent in the Forest. The pigs had only been sent in about a fortnight or three weeks when the disease was discovered, and it was immediately checked without any serious extension. It appeared to be a very serious matter at first with several thousands of pigs roaming in the Forest ; but these pigs keep to themselves in colonies as they have been sent in on one side of the Forest, and they scarcely ever stray to the opposite side of the Forest. The infected lot were immediately destroyed, both the diseased and healthy, and with a few cases afterwards, the disease died out.

28. Will you tell us a little in regard to the numbers that were affected by that outbreak, and also in regard to the total numbers affected that year ?—I have not got the figures here with regard to that outbreak. I remember being down in the New Forest at the time, and looked upon it as a very serious matter, and special legislation was adopted for it.

29. I believe I am not far wrong if I say that it is not an unusual thing for something like 4,000 or 5,000 pigs to be in the New Forest at certain seasons of the year ?—From September up to some date in November there may be 4,000 or 5,000 pigs congregated there.

30. That is what is called during the pannage season ?—Yes.

31. I believe it is also the case, is it not, that owing to the peculiar position of the New Forest and the boundaries of the adjoining counties, the position there affords considerable facilities for getting animals away ?—Certainly there are great facilities for removing animals from the Forest. There is no check on their movement out, unless some special regulation is passed to prevent it. A man who has a right of pannage, as they call it, may send his pigs in and take them out at any moment he chooses, unless there is some regulation in force by the Board of Agriculture to prevent it in connection with diseases.

32. And beyond that also, because I wanted to bring out this point : it is peculiarly easy, is it not, owing to the character of the country there to evade those orders when they exist ?—Yes, it may exist there for a considerable length of time without being discovered, and diseased pigs may be removed without anyone knowing of the removal.

33. The boundaries of several counties meet very near the New Forest, do they not ?—There are occupiers, small farmers, adjoining the Forest, in, I think, three counties that have a right to send their pigs in there at that season.

34. You are aware that the Wiltshire boundary, for example, runs there ?—The Wiltshire and Dorset boundaries come close to. Some of the Dorset farmers, I believe, in that corner of Dorset which joins the Forest have the right ; and then Hants is the principal county from which the pigs are taken into the Forest, as the Forest really is situated in Hants.

35. For that reason it has always been found difficult, and was found difficult then, was it not, to deal with all the dealers who came in and got pigs away ?—Yes, it was a difficult matter to deal with ; but a regulation was passed that the people removing pigs out of the Forest should have a license from the local authority into whose district they were taking the pigs, and the police force in the district were instructed to make inquiries of the driver of every cart with pigs in it, or of anyone moving pigs from the Forest to other districts.

36. And the police found their task, I believe, a very difficult one, did they not ?—They did at first ; but where they strictly enforced the rule there was not much difficulty about it. They had a little difficulty at first ; I believe there were statements made, although I could not verify them, that attempts were made by the dealers to get false licenses, to get signatures of magistrates to licenses which were not filled up, and then fill them up themselves.

37. You are referring to special orders passed in regard to the New Forest, are you not ?—Yes, dealing with the movement out of the Forest.

38. Those were the Orders of September 23 and November 26 ?—Yes, those were the Orders.

39. Now, in 1885 there was a great increase of disease, was not there ?—A very considerable increase of disease took place in 1885. The outbreaks in 1885 increased from 32 in the first week in January to 348 in the second week in June, an increase of ten times what they were in January.

40. What was the number of swine attacked in that year ?—The total number of swine attacked in 1885 was 38,798. In that year the infected counties rose from 54 up to 70, an increase of 16 in the number of infected counties in Great Britain.

41. There was an Order, which was passed in 1885, was there not, known as the Markets and Fairs Order ?—Yes ; the Markets and Fairs Order was passed in 1885, and came into operation on the 20th July in that year. When the disease had increased to such an extent during the early part of 1885, complaints became very general from local authorities about the movements of diseased and infected pigs into their districts. The consequence was that that Order was passed.

42. There was a subsequent Order, I think, in the same year ?—Yes, in 1885 there was a subsequent Order.

43. Two subsequent Orders, in fact, September and October ; will you give us their substance ?—The Order of July extended only to England, and was called the "Swine Fever Markets and Fairs "Temporary Order." Under that Order no swine could be exposed for public sale in any market or sale yard in England without the licence of the local authority, and then only for slaughter within three days. But, by that Order, the Privy Council took powers to give licenses for sales of store pigs under certain conditions. That Order was to remain in force from the 20th of July to the end of September, but it was continued by a further Order until the end of October, and by another Continuing Order until the end of November.

44. What was the result of that Order ?—The result of that Order was that the number of outbreaks, which were at the rate of 300 per week, at the beginning of July, had been reduced to 139 in the last week of September, and when continued to the end of October they had been reduced from 144 in the first

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week of October to 79 in the last week ; in the last week in November there were 77 outbreaks.

45. It was, however, found impossible, was it not, to continue that Order, owing to complaints of dealers and market authorities ?—The complaints of dealers and others in connection with the stoppage of trade became so numerous that it was considered advisable to allow the Order to lapse.

46. The facts, however, are very important as showing that prohibition of sale and movement is more effectual than slaughter ?—It would appear from the returns to be so, and it has proved so with regard to other contagious diseases, such as foot-and-mouth. Stoppage of movement has always been more successful than slaughter.

47. What shape did the complaints of the market authorities and dealers take ? Did they go to the then Sub-Department of the Privy Council, the Duchy of Lancaster, which was then charged with it ?—Yes. Of course, with regard to the Swine Fever Markets and Fairs Order, it interfered with the business of auctioneers who had public sale yards. These auctioneers began to complain immediately after the Order was passed, and asked for permission to sell store pigs in districts where swine fever was prevalent. Those applications were refused, and it was only in certain districts in England, which were comparatively free, that licence was granted for the sale of store pigs. The result was that the store pig trade was completely stopped, or practically, you may say, stopped. One man could go and buy two or three store pigs where he knew they were to be had, but he could not go to a market and find any ; he could not go to an auctioneer's sale yard and find any, so that it became a very serious matter with regard to people that wanted to buy, or wanted to sell, store pigs, and the complaints became so numerous in the autumn that it was considered advisable to allow the Order to lapse.

48. The result of that was to strengthen the policy of slaughter, was it not ? — Yes, that was the result.

49. And that led to the issue of some fresh Orders immediately after, did it not ?—An Order was passed and came into force on the 1st of December, making the slaughter of not only the diseased pigs, but those in contact, compulsory on the part of the local authorities.

50. We are still in the year 1885 ?—Yes.

51. Those Orders you are now alluding to were two Orders of November 18 and December 21, were they not ?—the Temporary (Swine Fever) Compulsory Slaughter Order 3345, of November 18th, and the Slaughter Order 3360, of December 21 ?—Yes ; the latter Order was a continuation really.

52. Will you give us the substance of these two Orders ?—Under those Orders it was compulsory on the part of the local authority to slaughter not only the diseased pigs, but all that had been in contact with them.

53. (*Mr. Joseph Smith.*) Was it compulsory ?—Compulsory.

54. All authorities had to slaughter ?—All authorities had to slaughter. Under the Swine Fever Markets and Fairs Order, slaughter was optional, but under the Order 3345 slaughter was compulsory, not only of the diseased, but of the healthy in contact.

55. (*Chairman.*) Only two counties in England in that year were free of disease ; is that not the case ? —Yes ; I believe that is so.

56. I think the two counties were Cumberland and Westmoreland, were they not ?—Yes.

57. The disease had also extended in Wales and in Scotland, had it not ?—The disease had, in 1885, extended to four fresh counties in Wales, and to nine fresh counties in Scotland, and the number of outbreaks in Wales in 1885 was 370, as compared with 76 in the previous year ; and in Scotland the outbreaks amounted to 186, as compared with 33 in 1884.

58. It was believed, was it not, that the condition of market-places and sale-yards, in regard to sanitary matters, was beginning to show a sensible improvement by this time under legislation ?—A sensible improvement had taken place in a number of the markets and sale-yards on account of their being shut up while foot-and-mouth disease existed. The improvement was rather due to the existence of foot-and-mouth disease and the consequent closing of markets. That began the reform which led to a better condition of the sale-yards. I think we had Norwich market shut up for something like six months, with the exception of animals for slaughter.

59. Now, I think we will go to the year 1886. Will you tell us the condition of things during that year about the disease ?—During the first two months of that year the compulsory slaughter of diseased and contact pigs continued, and the result was that the outbreaks seemed to increase under that Compulsory Slaughter Order. In the last four weeks in which the Markets and Fairs Order was in force there were 310 outbreaks recorded. In the month of February, the third month in which the Compulsory Slaughter Order was in force, 494 outbreaks were recorded.

60. Was the Compulsory Slaughter Order of 1885, in your opinion, carried out rigidly or not ?—I cannot say that it was carried out rigidly. Some of the local authorities appeared to carry it out rigidly, while others did not. That is what we have always found with regard to these Orders for compulsory slaughter, especially with regard to contact animals. While one local authority will slaughter everything on the farm that has been exposed to infection, others will only consider as contact animals those that have been in the same building and the same sty. Generally it was not rigidly enforced.

61. That is a difference of administration which is practically incurable, because people will always take a different view of that ?—Quite so.

62. Now in that same year there was another Order, was there not, issued in February in regard to sales ?—Yes, I believe there was an Order issued in that year in February with regard to the sales.

63. That Order restricted sales in districts in which the disease was prevalent, did it not ?—It applied only to certain districts where the disease was prevalent ; it did not apply generally throughout the country. It was an Order passed which could be applied to districts where the disease was increasing or becoming prevalent.

64. It only remained in force for practically a short period ?—Practically a short period.

65. About nine weeks, was it not ?—Yes, about that time. It lapsed at the end of April, I think, if I remember right.

66. Later in the same year there was another Order issued, was there not, on the 16th September ?—On the 16th September there was a Consolidated Order. Fresh legislation and separate Orders having been passed in connection with swine fever, it was considered desirable to have a Consolidated Order embodying the whole of the requirements of the Act and previous Orders in one.

67. There were, however, were there not, some fresh provisions in that Order in regard to cleansing markets and sale-yards and carts and vans ?—Yes ; not only that, but there was provision also for the seizure of pigs exposed for sale and the cleansing and disinfection of dealers' carts and markets and sale-yards.

68. Those provisions were very important, were they not ?—They were. They continued to diminish the amount of disease, in fact tended to prevent the spread of infection through means other than the movement of the diseased animals.

69. In this year also there was a very valuable report, was there not, presented by Professor Brown to the Council and laid before Parliament ?—It was a separate report dealing with the whole history of

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swine fever from its appearance in this country up to that date, embodying the whole of the facts and likewise the legislation that had been adopted to try and suppress it.

70. In 1886 the Contagious Diseases Act was amended, was it not?—Yes, there was an amendment of the Act.

71. Will you just give us the substance of that Amending Act; just tell us briefly what it is?—In that Act there were provisions as to infected circles and for contracting the limits of an infected place. Up to that time the Privy Council had no power to contract the limits of an infected place. They might extend it, but up to that time they had no power to contract it, and consequently inconvenience in many cases arose from large places being declared infected, and the Privy Council had no power to reduce the size of the infected place, which caused considerable inconvenience locally. Then there was an amendment with regard to declaration of freedom from infection and the repeal of Section 29 (provision as to slaughter). There was an amendment also for extending the definition of "Animals." Powers were taken for that, and for the transfer to the Local Government Board of the powers of the Privy Council under Section 34; that is to say, under the Milk Shops' Order. The legislation, however, did not particularly affect the question of swine fever.

72. In 1887 the disease still continued to increase, did it not?—It increased in 1887. There were eight more infected counties recorded, the outbreaks had increased from 6,800 to 7,200, and the number of swine attacked from 35,029 to 41,973. In that year, of the additional infected counties, one was in England, two in Wales, and five in Scotland, as compared with the preceding year.

73. It is the case, is it not, that up to that time the returns for the nine years previous showed a periodic increase and decrease in each year, the smallest number of outbreaks being in the first and last quarter of each year and the greatest at the end of the second and beginning of the third quarter?—Yes.

74. Might it not be said that this was a result of movement in the course of trade?—That is so. It has been noted throughout the whole of the history of swine fever since it became a disease under the Act, that at certain seasons of the year when there was a considerable amount of movement of pigs the disease increased, and at others when the movement was over and the store pigs had been bought up for a certain season for fattening, the disease decreased again.

75. That again points clearly to what your evidence has already indicated, that the principal cause of disease is movement?—Yes.

76. And that therefore restrictions of movement if possible are the true remedy for the disease?—Yes, it appears from all the statistics that we have of the disease that stoppage of movement tends more to reduce it than any other form of restriction that has been imposed.

77. In 1887 there was another Order, was there not, in regard to cleansing and disinfecting places where pigs are exposed for sale or kept?—Yes, that had more particularly reference to dealers' premises. In the previous Order the cleansing and disinfection applied simply to markets and fairs and to dealers' carts; but then dealers' premises were included afterwards and more stringent rules laid down for the cleansing and disinfection of those.

78. That would apply to that class of places of business which are known as repositories, as distinct from markets?—Quite so.

79. The restrictions in markets at once gave rise, did they not, to an increase of places of that kind, with a view of very often evading the law? Was not that the case in some parts of the country?—That was the case in several districts.

80. In this year, 1887, there was again apprehension about the condition of the New Forest, was there not?—There was; as the disease was somewhat prevalent in the neighbourhood the local authorities were afraid that they might have a serious extension of the disease; and therefore the verderers of the New Forest made application to be granted certain powers in connection with the admission of pigs into the Forest.

81. Have the verderers of the New Forest any special jurisdiction under their Act in regard to this matter, distinct from that of the county authority?—I am not quite clear what their powers are under their Act; but they were granted certain powers by the Privy Council with regard to the admission of pigs; that is to say, movement with a licence and veterinary inspection before being admitted into the forest.

82. It began to be clear by this time, did it not, that what was really at the root of all the difficulties in dealing with this question was the difference of practice between local authorities?—Quite so. It was perfectly evident that where one local authority slaughtered and paid compensation, and the adjoining local authority did not, it meant simply that the local authority paying compensation was wasting money, because the diseased pigs were run into their district on every possible occasion that dealers could do it. When people could get compensation for a diseased pig in one county and not in another, naturally, if they could evade the regulations and get over the boundary, their diseased pigs were moved into the adjoining county.

83. In fact, it was the case, was it not, that a flourishing branch of trade had really grown up in some places in what was known as "piners"?—There certainly was a considerable amount of movement of infected animals from infected counties, but whether it was a profitable branch of trade one could scarcely say, although you might suppose it was.

84. Now let us pass to the year 1888; there was a slight decrease in that year, was there not?—Yes; there was a slight decrease again in 1888.

85. But the disease was very general, was it not?—In 1888 there were 69 infected counties as compared with 71. That was really due to a decrease in the number of infected counties in Scotland. There were 15 infected counties in the previous year, and 13 in 1888. There was a decrease in the number of infected counties in Wales of one, but an increase in England of one.

86. The compensation returns still showed, did they not, that only a few local authorities carried out slaughter promptly?—That has been the case, I think, throughout the whole history of swine fever, so far as compensation has been concerned.

87. It also appeared, did it not, in this year, from some investigations at the Royal Veterinary College, that many cases reported as swine fever were found on inquiry not really to be so?—That was found not only at the Royal Veterinary College, but by the officials of the Agricultural Department as well. In making inquiries in different parts of the country we found that pigs which had been condemned and buried as cases of swine fever, had never had the disease at all.

88. The reports to the Privy Council of that year showed, did they not, that only 44 counties in England and Wales, and 10 in Scotland, paid compensation for healthy contact swine?—I believe that was so. Out of the 69 counties there were 15, I think, in which local authorities paid no compensation for contact animals at all that year.

89. There was another Order issued that year, was there not, amending the Animals' Order?—Yes, Order No. 3,701. Prior to that time, an inspector of a local authority could only declare an infected place where he could prove or suspect the existence of disease 10 days prior to his visit; but by this Order 3,701 the time was extended to 21 days, that is to say, that at any time within 21 days of the existence

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of disease on those premises he could step in and declare it an infected place. Previously he only could do it within 10 days after its existence.

90. And there were some further powers given with regard to disinfection ?—With regard to disinfection of vans, carts, and other things, nets and so on, used by pig-dealers in the movement of pigs from place to place.

91. On July 25 of this year (1888) there were some further Orders issued, were there not, in regard to the sale of swine ?—Yes, an Order was passed, Order No. 3,732, giving powers to local authorities to regulate or prohibit the exposure of swine in their markets for six months, an order which was afterwards continued, and they still have power to prohibit or regulate markets within their districts.

92. Those Orders were carried on immediately after by some Orders at the beginning of 1889 and at the end, in February and August, of 1889 ?—Yes.

93. 1889 showed a considerable decrease, did it not ?—In 1889 there was a considerable decrease, not only in the number of infected counties, but in the number of outbreaks and also swine attacked. The number of infected counties in 1889 was 61, as compared with 69 in the previous year ; the outbreaks were 4,841 as compared with 6,449 ; and the number of swine attacked 25,885 as compared with 32,241.

94. To what do you attribute the decrease in that year ?—I attribute the decrease, to a great extent, that year to the restrictions, the disinfection of vans and carts under Order 3,701, and the power given to inspectors of local authorities to declare an infected place 21 days after the existence of the disease. In that case, if you could prove that a dealer had sent away diseased pigs within 21 days you could shut his premises up.

95. Do you also attribute it partly to the Orders which you described immediately before under which local authorities had powers to make these regulations for prohibiting exposure for sale ?—It was no doubt partly due to that ; but at first very few local authorities, except those who had a considerable amount of disease, made any use of their powers. They simply had the power, but failed to make use of it, until swine fever became prevalent in their districts ; but no doubt the Order regulating or prohibiting the exposure of swine in markets had something to do with this reduction as well.

96. Now let us go to 1890 ?—In 1890 the number of infected counties increased again by three, the number of outbreaks increased somewhat, and the number of animals infected increased by nearly 4,000.

97. It appeared, did it not, from the returns, that only 44 per cent. of the diseased animals were killed, the rest being left alive on the chance of their recovery ?—Yes, that is so ; the number of diseased animals killed decreased.

98. The leaving alive of so many diseased pigs was recognised as a source of danger, was it not ?—It was, and must always be considered a source of danger leaving diseased pigs alive. The whole time the diseased pig is left alive he is simply producing material which would be infective to other pigs if brought in contact with it.

99. There was a fresh Order issued, was there not, in March of this year (1890) ?—Yes.

100. That is in regard to the *post-mortem* examination of carcases ?—Yes ; *post-mortem* examination was required then in every reported outbreak. A *post-mortem* examination of the first animals infected had to be made.

101. Now, will you give us the figures for 1891 ?—The figures for 1891 are, 66 infected counties, 5,595 outbreaks, and 32,349 swine attacked.

102. Those figures showed a decrease towards the end of the year ?—They showed a decrease certainty towards the end of the year.

103. There was no special legislation, I think, in 1891 ?—No.

104. Now have you the figures for 1892 in a shape that you could put before us ?—Yes, I have. In 1892 there were 66 infected counties, exactly the same number as in 1891 ; 46 of those counties were in England, as compared with 47 in the previous year ; that is to say, one infected county dropped out. There were 9 infected counties in Wales, as compared with 7 in the previous year ; and 11 infected counties in Scotland, as compared with 12 in the previous year, making a total of 66 infected counties. The total number of outbreaks for the year was 2,748 ; 2,616 of those were in England, 87 in Wales, and 45 in Scotland. With regard to the number of swine attacked, there were 13,957 attacked ; 13,151 of which were in England, 268 in Wales, and 538 in Scotland. Of those, there were 7,124 slaughtered, 5,789 died, 1,146 were said to have recovered, and 238 remained alive at the end of the year.

105. Those figures show a great decrease as compared with the previous year ?—They show a great decrease, certainly ; a decrease, to less than half.

106. Now to what do you attribute that great decrease ?—I attribute the decrease probably to the fact that the disease was not reported. Of course if the pig owners receive no compensation for the diseased pigs, and are harrassed with regulations, it is not likely they will report. There were 17 counties altogether, 13 in England, 1 in Wales, and 3 in Scotland, in all of which outbreaks of disease were reported ; but in which all the diseased pigs slaughtered were slaughtered by the owners and not by the local authorities. In those counties there were 571 outbreaks, 3,691 pigs attacked, and of those, 1,164 were slaughtered by the owners and not one by the local authorities.

107. Therefore the great diminution which appears on the statistics is not a matter really to which great importance ought to be attached ?—I think not. In addition to the counties I have already mentioned there were 10 other counties in which the disease existed, and the number of outbreaks in the respective counties varied from 5 up to 382. In those 10 counties there were 1,003 outbreaks recorded, 3,811 pigs attacked, 876 of which were slaughtered by the owners and 227 by local authorities.

108. (*Mr. Joseph Smith.*) That is 10 counties beyond the 17 ?—That is 10 beyond the previous 17. That would give a total, out of 1,574 outbreaks, of considerably more than half ; 7,502 pigs attacked, 2,040 were slaughtered by the owners and 227 by local authorities.

109. (*Mr. Stephenson.*) That is in 1892 ?—1892 ; the figures for the past year.

110. (*Mr. Joseph Smith.*) About a third of the pigs attacked were slaughtered ?—That is about 56 per cent. of the total outbreaks in which this occurred, and about 54 per cent. of the pigs attacked ; but in the 56 per cent. of the outbreaks that occurred during the year only 227 pigs were slaughtered by the orders of the local authorities. To quote an example : in Bedfordshire there were 105 outbreaks, and 215 pigs slaughtered by the owners out of 554 attacked ; not one by the local authorities. In Essex there were the same number of outbreaks, and 283 out of 856 attacked were slaughtered by the owners. In Cambridgeshire, out of 145 pigs attacked there were 27 slaughtered by the owners, and seven by the local authorities.

111. (*Chairman.*) In your opinion, it is exceedingly difficult for the local authorities through their police to get accurate information themselves, is it not ?—It is extremely difficult, for this reason : that the people will not go and report to a policeman that they have got diseased pigs on their premises ; and how is a policeman to find out unless the owner tells him, or some of his neighbours tell him ?

112. It would not be putting it too strongly, would it, to say that it is almost impossible for the police to get information?—I think it is in most cases impossible for the police to obtain information unless the local authorities are disposed to slaughter and pay compensation.

113. I mean that where a local authority has decided not to slaughter and pay compensation, the position of the police in regard to collecting accurate statistics for any of those purposes, or getting information, is practically hopeless?—Practically impossible.

114. (*Mr. Wardlaw Ramsay.*) You have more than once noted that the figures of increase or decrease were taken in the winter months; I would like to know whether there is anything to show that the disease is more prevalent in the winter months than at any other time in the year?—The fact is that the rise and fall, the increase and decrease, of the disease appears to depend upon movement more than on the season of the year or the temperature.

115. It is merely because there is more movement taking place at that time?—Yes.

116. (*Mr. Shaw.*) Do you not think that in the summer season, the warmer season, the disease is much more prevalent as a disease?—I cannot say that has been my experience. I have seen some of the most serious outbreaks of the disease occur in the winter months.

117. You spoke of a time of the movement of pigs. What is the time of the year that these pigs are principally moved?—There is more movement of pigs during the spring and summer months, and during the autumn than there is in the winter months. There is comparatively little movement of pigs generally in winter, except pigs for sale, pigs for slaughter, there is little movement of store pigs practically.

118. Taking your figures, as you gave them to us, did not they rather tend to show that the cases of swine fever fell off considerably toward the end of the year?—When the cold weather sets in; when there is no movement of stores.

119. (*Sir William Kaye.*) Have there been many prosecutions in the country against the owners of swine for not complying with the Order?—There have been a number of prosecutions from time to time instituted by local authorities; but in many cases they had a difficulty in obtaining conviction on account of requiring to prove guilty knowledge on the part of the owner.

120. There have been convictions?—Yes.

121. Have you any statistics on the subject?—No, we have no statistics. A local authority may prosecute, and the Board of Agriculture get no information whatever of that prosecution; they would only see a report of it in a newspaper extract.

122. (*Mr. Joseph Smith.*) With respect to these counties which have not compensated and which have not slaughtered, do the statistics show that there has been an increase in those counties or in the districts of those authorities?—No, the only counties that were entirely free from swine fever were Cumberland, Hereford, Westmoreland, and the Scilly Islands, which, of course, is a separate authority now and not in connection with Cornwall. Those were the only counties that were entirely free from the disease during the whole of last year.

123. Then statistics do not prove that where they have not been slaughtered it has increased?—No, there is every reason to believe that where slaughter and compensation is not carried out by the local authorities disease is concealed, not reported.

124. That is only a supposition; you cannot prove it?—Yes, we can prove it by referring back to the statistics of individual counties in a previous year.

125. Has the disease increased where they have not been paid for?—No, it has not increased where they have not been paid for; and, in fact, the whole of our statistics show that, where a large amount of compensation has been paid in one year, the number of outbreaks the following year has been increased.

126. (*Mr. Shaw.*) Because reported?—Because reported.

127. (*Mr. Joseph Smith.*) That is a matter of opinion?—I do not think it is quite so much a matter of opinion. In 1884 the amount of compensation paid was exceedingly small, and in the following year, 1885, when the compensation increased, the increase led to a greater number of outbreaks being reported.

128. (*Chairman.*) I suppose you have always to read your figures by what I think is, to a certain extent, suggested in the question, by the fact, which is a melancholy experience of human nature, that paying compensation not only causes the reports, as they ought, to be made and information given, but occasionally tempts people to do what is vulgarly called "trying it on"?—Quite so.

129. That may have some effect, but of course it is not a matter which can be proved by any figures?—No figures can prove it. I should like to add, with reference to the question whether in those counties in which slaughter was not carried out disease had increased or diminished, that the fact is that the reported outbreaks considerably diminished in 1892, showing clearly that the disease was not reported. In the 27 counties I mentioned during the last year they had, as I had mentioned, 1,574 outbreaks, and in the previous year they had 3,142.

130. (*Mr. Stephenson.*) Do you think all the cases reported which you have quoted here to-day have been all true cases of swine fever?—Very far from it. Take these returns; in some counties where the disease has existed, and a considerable number of pigs have been attacked, there has not been a single recovery. I look upon those as genuine outbreaks of swine fever. But in other counties, where the number of recoveries range from 20 to 30, and even nearly 40, per cent., I look upon the returns for those districts as very incorrect; probably a number of other diseases are reported as swine fever which are not swine fever, but are diseases of a milder nature.

131. Do you think all the outbreaks of swine fever in the kingdom are reported to you, and if not, what percentage are not?—We cannot tell what percentage are not reported, but we do know from experience that every now and again we hear of outbreaks reported in a district where the disease had not previously existed, and amongst pigs purchased within the previous fortnight or three weeks, where no disease had been reported on the premises from which the pigs were sent.

132. (*Chairman.*) Now, as to the nature of the disease and its apparent difficulty of diagnosis as compared with other diseases of animals, will you give us the benefit of your knowledge and experience with regard to those points?—With regard to the disease itself there can be no doubt, from all experience, that it is really a very contagious one, and not only contagious by the contact of diseased pigs with healthy ones, but the infective material may be carried by people or by objects, feeding-troughs and such-like things, which have been in contact with diseased pigs and are afterwards brought in contact with healthy ones without disinfection; that is to say, it is capable of transmission both by mediate and immediate contagion. To induce some diseases in another place it is necessary to have contact with the actual disease, by having infected animals moved, but in this case the disease may be conveyed by other means.

133. What in your opinion, so far as you have been able to form a definite opinion, is the primary cause of the disease?—So far as we can make out it is an infective material which is given off by the diseased animals, which may be conveyed either by the animals themselves or by other agents to other places and districts.

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134. Rather what I meant was this: What are the conditions which produce the disease?—The keeping alive of diseased pigs; that is one of the conditions which tend to keep up the disease; the movement of infected pigs, and the keeping alive of diseased pigs on infected premises.

135. I want, if possible, to get your opinion at a stage a little further back. I am quite aware that it is a matter of controversy, but we want to have your opinion as to whether there are any circumstances which have come before you, which you can say can be put down clearly as being the primary cause of an outbreak in a healthy place?—I know of nothing but the introduction of the infective material in some way or the other. It is not one of those diseases which can be said to arise *de novo*.

136. You are quite clear that it is not a disease which can be called in any case spontaneous, under certain circumstances?—I am not aware of a single instance in which spontaneous origin can be proved, and so far as my own experience goes, although I have sometimes failed to find the source from which the disease was introduced, in most cases I have been able to trace the sources of infection.

137. The disease is known as the typhoid of swine?—Yes; that title was given to it, I believe, more particularly through the late Dr. Budd, because he was studying the typhoid fever of the human subject at the time. It was very prevalent in some parts of the West of England, especially near Bristol, when his attention was directed to this disease, and seeing *post-mortem* appearances somewhat similar in both diseases, he came to the conclusion that they were one and the same.

138. Is that your opinion?—No, it is certainly not my opinion. There are certain differences with regard to the *post-mortem* appearances; and then the history is quite different from that of typhoid fever in man. The late Dr. Murchison, of St. Thomas's Hospital, took the opposite view to Dr. Budd, and there was a considerable amount of correspondence, which appeared in the medical papers at the time, with regard to it. I think Dr. Murchison was right, and that, although the disease had certain points of resemblance to human typhoid, it was clearly a different and distinct disease, affecting swine only.

139. Now, will you tell us what your views are with regard to the treatment of the disease?—With regard to the treatment, I have had very little experience. I have seen the pigs allowed to live and a few recovered, but my own experience is that the recoveries only really amount to from 8 to 10 per cent.

140. Is it not a common cause, or a supposed cause, of the disease, that pigs go and lie out in very hot places in summer weather, and then get into cool ones, and get a violent chill, and then the disease appears to follow?—I have not had any experience of cases of that kind. I have never known pigs suffer with swine fever from basking in the sun and then going into a cold place afterwards, because, as a rule, what would follow would be congestion of the lungs, without anything else; but, as a rule, pigs' lungs are extremely healthy, with the exception of this swine fever, and you always have the lesions in the lungs in this case associated with lesions in the bowels. The movement from a hot to a cold place would not implicate the bowels.

141. You think then that an opinion, which I know exists amongst many people in the county where I live, that swine fever is occasionally produced by pigs lying out on filthy manure-heaps in hot weather and then going into cold places is erroneous?—I think it must be, at least I have never known anything of the kind occur. I daresay that pigs in Cumberland, Westmoreland, and Hereford, three counties which have enjoyed remarkable immunity from swine fever, often lie out on manure-heaps and bask in the sun at one time and get into a cold place the next.

142. What is your view in regard to the subsequent effects of dirt on the disease; do you look upon it as an important factor in keeping up the disease and making, as it were, a nest for it?—Certainly. I look upon pigsties where the disease has existed as being a fruitful source of infecting newly-brought-in pigs, if the sties are not properly cleansed and disinfected; that is to say, that the infective material of swine fever seems to thrive in dirty places. But probably something may be said in that connection, for the fact that where you have dirty places and pigs kept in them there is generally bad management throughout the premises.

143. Have you given any attention to the question of the effect of keeping up swine fever, and the existence in a great number of towns, especially small towns, where the sanitary regulations are not efficiently carried out, of an enormous number of these small and filthy pigsties?—Yes, I have. I have seen some very remarkable instances of the continuation of swine fever in the suburbs of some large towns where pigs were kept in little pigsties in the garden at the back of every house. I have known it spread from one to another right along the whole line, and without any introduction of fresh pigs, but simply by the movement of the pigs from one pigsty to the other.

144. I suppose in those cases it would be most difficult to eradicate the virus?—It is very difficult indeed to eradicate the virus; more difficult than any other contagious disease I know.

145. Now, what are the best means of eradicating it?—The best means of eradicating it would be to have the floors of the places where they are not paved taken up, the whole of the wood-work destroyed, and fresh floors laid; where there were brick walls, thorough cleansing and disinfection of those. Probably the best thing would be washing down with water first, and afterwards with a considerable amount of carbolic acid in the water; then lime-washing.

146. The dealers' carts, I suppose, are a fruitful source of difficulty in regard to this matter?—Yes; the dealers' carts certainly appear to be a fruitful source of mischief. The local authority for Dorsetshire first called attention to that fact. They seemed to prove not only that the dealers' premises but the carts, in several instances, were a source of mischief. They found that dealers had taken pigs in their carts from premises where no disease had existed, and deposited them afterwards, without taking them home, at other places; and they attributed the outbreak of disease ten days or a fortnight later to the contact of the pigs with the dealers' cart.

147. Can you suggest any steps that might be taken which are not taken now in regard to this matter?—The only thing to be done is really to enforce the disinfection of the dealers' carts, and that is a difficult matter; local authorities have great difficulty in carrying it out.

148. Now, in regard to these dealers' carts, do you consider, especially since your experience of the action of the Board of Agriculture in other matters connected with the diseases of animals, that there is anything which could be done by the Board of Agriculture in this matter which is not done by the local authorities?—No; I fail to see how the Board of Agriculture could enforce it. They might issue regulations, but there would be a great difficulty in enforcing any regulations they might make.

149. You mean the Board of Agriculture must always depend upon the local authorities in a matter of that kind?—In certain matters it would require an enormous staff to see that the regulations were enforced. The staff would have to be something very large indeed to see that the regulations were carried out as far as the disinfection of dealers' carts was

concerned. You see, a dealer may be in the district of one local authority to-day and in the district of another to-morrow. With regard to the markets and sale yards, of course we know where they exist, and it is an easy matter to have travelling inspectors to look after those, paying periodical visits to see that they are properly cleansed and disinfected after market days; but with dealers' carts it would be a very difficult matter indeed. Then another question arises, what constitutes a dealer? if you were to adopt the system of licenses.

150. You do not think that any alteration or improvement could be made by licensing?—I cannot see that anything could be done in that direction.

151. Now, would you indicate the principal differences which strike you as existing between swine fever and the other diseases of animals which are now dealt with by the Board of Agriculture?—Swine fever and foot-and-mouth disease seem, with regard to modes of infection, to correspond very closely; that is to say, with regard to foot-and-mouth disease, and also swine fever, the disease can be carried by people, or by feeding-troughs which remain on the infected premises; it is not necessary to have actually the diseased animals moved either in foot-and-mouth disease or in swine fever. They are both capable of being conveyed by mediate contagion. With regard to pleuro-pneumonia it is quite different; it necessitates the movement really of a diseased or infected animal to induce the disease in another place. Therefore, in dealing with swine fever, further powers are necessary. Not only that, but the difficulties arising with regard to legislation are very considerable. In pleuro-pneumonia a man cannot get the disease wilfully on his premises without buying a diseased or an infected animal. In the case of swine fever, or of foot-and-mouth disease, he might obtain infective material, and carry it there on purpose, but in pleuro-pneumonia it would be impossible for him to do so. In the case of glanders and farcy, the infective material might be carried by human beings, or by stable utensils, from one stable to another, but it is very rarely that that is done. With regard to sheep-scab, that might be carried by tufts of wool from the diseased animals, but I think it is very rarely that would occur. In the case of rabies and anthrax the infective material is conveyed in quite a different way. In the case of rabies it actually requires a bite of the rabid dog, or the saliva from a rabid animal being got into a wound or injury; and anthrax is a disease whose infective material seems to remain more in localities at farms and in certain fields, sheds, and so on, than to be conveyed from animal to animal by contact.

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152. Now, what conclusion do you draw from those facts?—The conclusion I draw from those facts is that, whereas it was an easy matter to stamp out pleuro-pneumonia by slaughter, it becomes an exceedingly difficult one to deal with swine fever in that way.

153. And, therefore, that other remedies must be looked for?—Yes. In the case of pleuro pneumonia, knowing that at every place where the disease was reported or found to exist a diseased or infected animal must have recently been purchased, you could then trace the source of origin right back to the herd or to the dealer from which the cattle had been bought, but in the case of swine fever you will get a history showing that there have been no fresh pigs brought on the premises for a considerable time, and still the disease arises there through some other source of infection.

[The Witness withdrew.

[Adjourned for a short time.]

Mr. CHARLES HOWARD, called; and Examined.

Mr. Charles Howard.

154. (*Chairman.*) You are chairman of the Executive Committee of the County Council of Bedford appointed to deal with contagious diseases, are you not?—Yes.

155. In that position and in your own personal experience you have naturally given a great deal of attention to the whole question of the diseases of cattle?—I have, and I began to do that under the old system, before the County Council Act came into operation.

156. Will you briefly indicate to us the policy which has been pursued in your county in regard to swine fever, on the points which you, as a practical man know are the principal ones, namely, movement, slaughter, and compensation?—Bedfordshire occupies rather a conspicuous position with regard to pig breeding. It was owing, no doubt to the reputation which my late brother acquired in pig breeding that so many men in Bedfordshire began to advertise their pigs. Those men, no doubt, have picked up pigs wherever they could find them, as long as they were white ones, and sold and sent them about to all parts of the country as pigs which might be, or might not be, but I have no doubt they would wish the impression to be, that they were of the Clapham Park breed of pigs. Those pigs have been sent far and wide, and they continue to be sent, but not, I think with the prestige of the Clapham Park about them now, because that has departed. What we complain of is this: It is no use for us to make Orders as long as men can bring in pigs by rail. I will just put this notice in to show you what our County Council has done in Bedfordshire. (*Handing in printed notice.*) It will be seen there that we order that no pigs shall come out of the surrounding counties. Since we have issued the Order dealers from Bedford and the neighbourhood go outside our county to St. Neots, which is in Huntingdonshire, and Hitchin which is in Hertfordshire, and buy pigs there. They cannot bring those pigs over the border in a cart, but they send them through by rail to Bedford, and from Bedford they send them to all parts of the country.

157. (*Mr. Carrington Smith.*) To the borough?—Into the borough of Bedford, which is a quarter sessions borough, and which is not under our authority as a county council.

158. (*Chairman.*) The borough of Bedford is an independent jurisdiction for cattle plague purposes?—It is quite a separate district; it is a quarter sessions borough.

159. Besides Bedford, is there another quarter sessions borough in your county?—No, there is not.

160. Is there not one with an independent jurisdiction, as I may put it, Luton?—Yes, but that is not a quarter sessions borough. We prevent them coming in from Luton.

161. For the purposes of the Act, it does not signify whether it is a quarter sessions borough or not; I mean that it has a jurisdiction in regard to cattle plague purposes which is independent of the county?—Yes.

162. Will you describe to the Committee the regulations for swine fever which are now in existence in your county?—Pigs cannot be moved from the counties surrounding us into our county, but we have no control over the borough from which they can be sent. The point that I wish to press upon the Committee strongly is that the dual authority makes it so difficult to deal with swine fever.

163. The point you say that you especially wish to

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urge upon this Committee, that you especially come here apart from other points to urge, I understand, is the trouble that arises from the division of jurisdiction ?—Certainly, and the desirability of the disease being suppressed the same as pleuro-pneumonia was from head-quarters.

164. I will come to that; I am now asking you with regard to the point which you say is rather an important point, and which is a new one so far as our sitting to-day is concerned, namely, the difficulties placed in the way of a county by the existence of these independent jurisdictions. You find, from your practical experience, very great difficulty from these independent jurisdictions of Bedford and Luton within the county, do you not?—I think the endeavours of the county are frustrated by the action of the borough authorities.

165. Have any communications passed between the county and these boroughs in regard to the surrender by the boroughs of their jurisdiction either by agreement or otherwise?—I am not aware of that; I know they were very irate in the borough of Bedford because we did not previously inform them of our action in preventing pigs coming out of the borough into the county.

166. I suppose you are aware (in fact, what you have just stated shows that you are aware) that in these matters there is a very great deal of jealousy on the part of urban local authorities when they are asked to surrender their jurisdiction either in whole or in part?—There is, for the simple reason that you may affect their receipts in the shape of borough tolls, and you are interfering with their markets.

167. But, at the same time, you, I understand, have come here, amongst other things, to urge upon us the importance of action being taken to put an end to these jurisdictions within jurisdictions, so to speak?—I think there should be one jurisdiction if you mean to stamp this disease out; it must be so in my opinion.

168. We will take the points separately; we will first of all go to one jurisdiction, by which I suppose you mean the Board of Agriculture?—Excuse me, I have not come here to press any particular views of my own upon the matter. I was requested to come here to give evidence, and anything that you like to ask me I shall be very glad to give my best opinion upon.

169. We want you to tell us about the facts, and we also naturally would wish to have the benefit of your experience, which we know is a large one. I am wishing to take these points separately. You are of opinion that the existence of these urban jurisdictions within counties places difficulties in the way of the administration of these Acts, which might be avoided?—I have no hesitation in saying that it is no use our going on in the county unless you stop the boroughs in the course they are pursuing now. I can tell you that I should think there are 200 pigs a week leaving Bedford. They have been stopped a little bit just lately, in consequence of the railway rates being raised, and the profits consequently being lowered. As far as our pig-breeding in Bedfordshire, or pig selling, is concerned, I think it is a pity that the railway rates have decreased. They had stopped these sales; and since the rates have been relaxed, I am given to understand that there are as many as 200 pigs a week leaving Bedford. Where they go to I cannot say, but it only shows that in consequence of the separate jurisdiction and want of uniformity of action, these pigs are sent far and wide throughout the length and breadth of England.

170. Your opinion, therefore, is that the principal cause of this disease not being stamped out is the facility for movement, and that anything which tends to restrict the facilities for movement tends also to the limitation of the disease?—I think so.

171. Now, will you kindly tell us what has been done in Bedfordshire, and what is done now in regard to the slaughter of animals and the question of compensation?—We have no compensation as far as our County Council is concerned. We did compensate, but we found that the disease increased, and we left it off. It was better not to compensate. From what cause I cannot say. I have my own opinion about it, but such was the case. When I first joined the Contagious Diseases Committee under the old regime, we compensated, and I think we did for a short time after the County Council Act came into operation; but for some long time we have not done so. We found that pigs were neglected and kept in all manner of filth and dirt, which I consider a very strong inducement to engender disease. We left it off, and we have not had so much since. It is now, I am sorry to say, rising again very considerably in Bedfordshire.

172. Since you ceased to pay compensation, have you reason to suppose that cases are numerous of which the local authority, the county authority, gets no notice?—Very likely, but I am not positive about that. It is quite likely that men have not given notice of it.

173. Are you aware that by the figures of the year 1892, which are now in the possession of the Board of Agriculture, there is a very large diminution of swine fever all over the country apparently?—Yes.

174. And that the question therefore has to be asked, is that diminution a real diminution or an apparent diminution?—I am afraid it is apparent to a great extent. As far as our county is concerned, there is no doubt it has increased of late. It decreased for a certain time, but it has increased again considerably now. It is thought that the hotbed of the disease emanates from the cattle marts at Bedford. I may say that Bedfordshire holds a very peculiar position. I should think it is one of the largest pig marts in the whole of England, for fat pigs, and for store pigs; and it has been for very many years past, ever since I was a boy.

175. You referred just now to the filthy condition of these cattle marts?—No, I beg your pardon, I did not say the filthy condition, because they are kept clean.

176. (*Mr. Stephenson.*) It was the sties you referred to, I think?—Yes. It was considered that the disease emanated from these places. They are constantly occupied week after week, and year after year, although the owners are bound by the local authorities of the borough to see that their places are properly cleansed and lime-washed.

177. (*Chairman.*) Do you consider that those regulations are efficiently carried out?—As far as that is concerned, yes.

178. But you are of opinion then, I understand, from one of your previous answers, that there is no doubt that dirt is an efficient cause of keeping up the disease, assuming that it does not originally create it?—My own opinion is that it is. I will tell you why I say this. In a large experience of my own and my brother's herds, and of others, I have never known swine fever attacking a herd which has been well kept; I mean a pedigree herd. Mr. Sanders Spencer, who is one of the largest pig breeders in England, and who has a world-wide reputation, has never had swine fever. My brother, who had one of the finest herds in the kingdom, did not ever have swine fever, so far as I know. I think some gentlemen round the table can bear me out, that when the cattle plague visited this country there very few of the thoroughbred and pedigree herds of the kingdom, which were well taken care of, that were attacked by the cattle plague.

179. Is your view, therefore (this is a very important part of the inquiry) that swine fever must find, as it were, a bed prepared for it by neglect of sanitary conditions before it breaks out, whatever the original cause of the disease may be?—I believe it is accelerated by dirt and filth.

180. Did you not use the word just now that dirt

"engendered" the disease?—No, I think you misunderstood me. I may have said that it facilitated and developed it. I think you are connecting my remarks just now with Bedford. I wish to be quite clear about that. I merely said that in consequence of the continual sale of pigs in Bedford Market it is felt that swine fever has been disseminated from that focus, if I may so express myself.

181. But you do not wish to make any observation at all with regard to the condition of the Bedford Market?—Bedford Market is kept as clean as you could wish to see anything.

182. Have you given any attention to the question of the regulations relating to pigsties in towns generally, as to how far, for instance, the neglected condition of many of these pigsties is the cause of disease in small towns especially, whose sanitary regulations are not as well carried out as they are in large towns?—As far is Bedford is concerned, they do not allow a pig to be kept within so many yards of a human dwelling.

183. You are aware that there are a great number of towns where such regulations have been found impossible owing to local opposition?—I have had no experience in such towns. I have had the good fortune to live close to a well-regulated town all my life.

184. What is the population of Bedford now; it is a large town, I think?—Thirty thousand, within a slight number.

185. Have you any knowledge of any cases where prosecutions have taken place for a breach of the regulations in your county?—Only just lately two or three prosecutions have taken place. I may say that the police have some difficulty in finding these cases out, and that I am not surprised at. I have always been an advocate for paying the police; but we have been told by the clerk to our county council that in view of Section 10 of the Police Act, 1839, we have no power to do that sort of thing. It is not likely that men who are employed all night long are very anxious in the daytime to do an extra lot of work for which they get nothing. That is a point, to my mind, which ought to be seen to. I think men who do work, especially policemen, ought to be paid for it. I think we should have this swine fever looked up a little more actively if they had some remuneration.

186. Your view, or rather that of the clerk of your county council, and I have no doubt it is a correct one, is that at this moment any such payment as you suggest to the police would be surcharged by the auditor?—We cannot make it.

187. It would be surcharged by the auditor?—He would not allow it.

188. Have you any plan that you could put before us in regard to paying the police, because naturally it suggests the notion of the police acting as informers, and you must consider how you would remunerate them without giving them an undue temptation?—I am no advocate for increasing the local burdens. If you can pay the police out of the Consolidated Fund or Imperial sources, I should be glad. I should be very sorry to advocate the payment of the police, as I said just now, out of local resources. But still they ought to be paid, in my opinion, and you will never get good service without it. Then, in consequence of their constitution, the borough police and the county police are not on all-fours occasionally; they do not act together.

189. Has Bedford got a separate police force as well as a separate contagious diseases jurisdiction?—Yes, the borough has a separate police force, and I can assure you that our watch committees are very jealous of their powers.

190. There you get back to the question of the separate jurisdiction; what I am rather anxious to get your evidence upon now is as to whether you, or any of your friends in Bedfordshire, have ever worked out in your minds any plan by which you could give a sufficient inducement to the police to act more efficiently than they do in ascertaining and reporting cases of swine fever?—Yes, we have thought that out. I thought it out a long time ago, and wished to see it carried out, and advocated it. If you want a service well done you must pay for it. We did pay; we gave them a gratuity before the County Council Act came into operation. I do not know why it is, but our clerk to the County Council states positively that we have no power to do it. It was done, however, under the old Act.

191. (*Professor Brown.*) You found that when you did not pay compensation the number of reports decreased?—Yes.

192. But you did not take that to mean that the disease was really falling off?—I cannot say; they might not report cases of disease.

193. Has the owner any temptation to report under those circumstances, when he does not get any payment for his pigs; if he does report, what happens to him?—He may kill them or not, as he likes.

194. Do they do anything with regard to his premises?—No.

195. Do they not shut them up?—We shut them up, certainly.

196. Then it comes to this, that if a man reports that he has swine fever on his premises his premises are shut up; he cannot get rid of his pigs, and they must stop there till they die or get well?—They must stop there till they die or get well.

197. Either one or the other; until the Contagious Diseases Committee declare the place to be not infected. I suppose from your experience you will say that, as a rule, a good many of the animals die?—Yes.

198. Under those circumstances would you consider it very remarkable that people do not report?—No, I do not think it is.

199. They have every inducement, in fact, to keep the disease secret, and to get rid of the pigs as fast as they possibly can?—I have not heard of their getting rid of their pigs in that sort of way, not clandestinely, because it happens to a lot of small men generally.

200. You think they keep them on their premises till they die or get better, and that they would not try to get rid of them surreptitiously?—I do not think they would try to get rid of them in that way unless they were put up to it.

201. Have you heard, or are you aware, that there are a good many outbreaks in different parts of the country which are traced to pigs bought from the Bedfordshire dealers that you have spoken of?—I am sorry to say I have heard that, and I wished to come here to-day and try to clear our character somewhat, and to put us in a rather better position in Bedfordshire.

202. Can you explain the fact, as it undoubtedly is, that a good many diseased or infected pigs are sent from Bedford?—I have not the slightest hesitation in saying that there has been an immense number sent out of Bedfordshire to all parts of the country. I have been, at our public meetings, attacked very considerably by friends of mine in various counties for the black character we have in Bedfordshire. I did not tell them I was chairman of the Contagious Diseases Committee, but if I had I should have supplemented that by saying that we had a quarter sessions borough, which was not under the control of the county.

203. Then you apprehend that the disease is distributed by that arrangement which you spoke of, which allows them to go into the boroughs and out?—Into the towns. I have got a letter here before me now. A man in Bedford, one of these dealers, sent pigs by the London and North Western Railway to Newcastle; the one in Staffordshire, I fancy. They were refused by the borough authorities. They were fed by the company, that is the London and North Western Company, and they were brought back to Bedford. They were re-sold by this dealer and re-

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turned again from where he sent them as not up to the mark. Some died, some were sent away, and some were killed. The man began to sue the company for starving these pigs; the company showed fight, and the man withdrew. However, these pigs were spread far and wide.

204. (*Mr. Carrington Smith.*) How long is this ago?—Not long ago. Then I know that the county police looked into this matter, at least our county inspector did, but the police were not backed up by the borough authorities.

205. (*Professor Brown.*) No inquiry was made as to the history of these pigs, I suppose?—No inquiry was made. What I wish to particularly bring before the Committee is, that is due to the railway transit of pigs. We are not allowed to take pigs along our high roads from one county to another, and yet the railways can send pigs throughout the length and breadth of the land, through one county after another, and no question is asked at all about it. I cannot understand why they are allowed to do so. Then a strong point upon the whole question is, that there is a very strong impression about the country that a good many of our veterinary inspectors do not know swine fever when they see it.

206. (*Sir Jacob Wilson.*) I was going to ask you that question?—There is a very strong feeling on that point. I have heard it stated that when a pig is once attacked with swine fever it never gets over it; but in our returns we sometimes have it stated that so many have been restored and got better. In our county some few years ago one of our inspectors declared some pigs to be suffering from swine fever; there was a little hubbub about it. The owner did not believe it was swine fever, and a request was made to the Privy Council to send down an inspector. These pigs were exhumed. I do not think Professor Brown came down on that occasion; I think it was Professor Axe. These pigs were exhumed, and they were found not to be attacked with swine fever. I may say that since that time the man who was our inspector has been asked to retire. I think these appointments should be made very carefully indeed. Before they are made, I think men should pass an examination before the Veterinary Head Department as to their being fit for inspectors of swine fever.

207. I suppose the county of Bedford has duly qualified inspectors?—Yes, several; every petty sessional division has one.

208. Has the borough also?—Yes, two.

209. By whom are those inspectors appointed?—They were formerly appointed at quarter sessions.

210. And now?—And since, when there is an appointment vacant, it is filled up by the Contagious Diseases Committee of the County Council.

211. Then they are the local responsible authorities who make the appointments, and investigate the character and ability of these gentlemen before they are appointed?—They do to the best of their ability.

212. And do they still?—Yes. Allow me to say that their choice is very limited.

213. Do I gather from your remarks to Professor Brown that you wish to see the power of appointment taken out of the hands of the local authorities and placed in those of the Board of Agriculture?—I do not care whose hands it is placed in so long as we get efficient men. I believe we have some exceedingly good men in Bedfordshire, and I would not for a moment be thought to say a word against those men; but I am not speaking for Bedfordshire only. Mixing as I do with a great many agriculturists throughout the country, I hear what they have to say.

214. Let me put it more generally; would you take it out of the hands of the local authorities of the country, and put it in the hands of the central authority?—I would put everything about this in the hands of head-quarters, if you mean to get rid of swine fever.

215. Are either of the two inspectors attached to the borough of Bedford connected in any way professionally with the county of Bedford?—Certainly; both inspectors are. They are very able men, both of them.

216. Do I gather that they are both inspectors in the county as well as in the borough?—They are both in the county and in the borough. Very able men they are, such as I could recommend the Veterinary Department to adopt.

217. I gather that you attach a good deal of importance to the fact of animals arriving at Bedford by rail rather than by road, as being a means of introducing the disease?—They cannot get them by road, but they can get them by railway, and that is the anomaly of it in my opinion. When you touch men's pockets you generally find out what they want or mean. We have a large number of pig dealers in Bedfordshire, and they complain of the superior position these men occupy in Bedford in carrying on their pig trade, because those who happen to live in the country cannot cart these pigs from St. Neots or from Hitchin into our county, but the men who live in Bedford can carry on a roaring trade by taking their pigs by rail from St. Neots and Hitchin into the town of Bedford, and from the town of Bedford they can disseminate them to all parts of the kingdom.

218. Whilst there is a prohibition against the admission of pigs from other counties into the county of Bedford, there is a power of entry from other counties into the borough of Bedford?—Yes, they can bring the pigs into the borough of Bedford.

219. Do I gather also that there is an equal power of entry from the county of Bedford into the borough of Bedford?—Yes, they can take them into the borough, but they cannot move them out of the borough.

220. But they cannot move out of the borough of Bedford into the county?—No.

221. Am I correct in assuming that there are several men in the borough of Bedford who, as pig dealers, advertise pigs for sale, but practically have no pigs in their possession within the borough?—They may have a few pigs in the borough. I am quite aware that these men advertise as living at some farm or farms in Bedford. They may have a few acres of land, but the pigs that they sell are more or less all purchased.

222. I was coming to that; so soon, I presume, as an order for purchase is given to these men to send pigs to other parts of England, they go into the county of Bedford, or elsewhere, and bring them in?—Yes, either in the county or out of it; they bring them in by rail.

223. In the one case they may bring them in by cart from the county, and in the other by rail only?—That is it. They can bring them in by cart from the county itself.

224. I gather then from this, that you attribute a good deal of the difficulty in getting rid of the disease, so far as Bedford is concerned, to the want of uniformity of action between the borough and the county?—A great deal.

225. I also gather from your evidence that whereas formerly compensation was given for diseased animals slaughtered, that system has been dropped?—We have dropped it.

226. Now, was there any complaint made that that compensation, so long as it existed, was not quite sufficient?—No, I do not remember that at all. I do not think it was so.

227. Can you give the Committee any idea of the proportion of the value of the animal which was given as compensation?—I think, to the best of my remembrance, it was two-thirds, or three-fourths, I forget which.

228. Was that for the diseased animal, or for the

animal in contact?—For the diseased animal, or for those which, I may say, had to be killed in consequence of contact with the diseased animals. The owner did not quite realise the whole value.

229. Suppose that, in future, compensation was made compulsory, what, as a practical man, would you recommend as a basis?—Of value?

230. Yes?—I do not think a man ought to put all his misfortune upon the country; I think he should partake of some of it.

231. I am not talking of the source from which it comes; I am dealing with the amount that you would give to an owner?—My remarks led up to that; I should say three-fourths of its value.

232. As it stands at present, under the Swine Fever Order of 1890, I think the maximum value is limited to 4*l.* for the animal in contact; do you think that is enough, supposing a pig was worth more?—No, I would rather take my view of it and give three-fourths of it, because an animal might be worth 7*l.* or 8*l.* It might be a fat pig.

233. What proportion of that would you give?—I ought to say that I have not thought this matter over very deeply, and therefore I do not wish to commit myself too much; but, upon the first blush of the thing, I should say three-fourths.

234. Then I will not press it; beyond this, do you think it desirable or not that there should be compensation?—I think there should be, certainly.

235. Your opinion is that the disease has been considerably fostered by the fraudulent concealment of its existence; I think I gather that from you?—I think it has, but I should be very sorry for you to think that I considered the pig breeders throughout the country had done that sort of thing.

236. I never said a word against the pig breeders?—No, but I wish to make that plain. I believe that the disease has been concealed by dealers.

237. I am not suggesting by whom; I am only asking whether the practice exists?—I have not known of any case myself.

238. There are pig breeders and pig breeders?—Yes, I am quite aware of that. We know what black marks are against pig breeders even.

239. There is one little matter which I think the Chairman was not able quite to clear up; I gathered from you (I took the word down) that the dirty condition of the pigsties, in your opinion, frequently "engendered" the disease, but did you mean to say that?—I meant to say "developed" it. If I used the word "engendered" I ought to have said "developed."

240. Is it your opinion that the true origin of the disease must have been through some mediate or intermediate form of contact?—Certainly.

241. Now you say, in your position as chairman of committee, you have frequently had complaints from your neighbours and friends, and others at a distance, against Bedford having been the origin of the disease elsewhere?—I have certainly heard that; too much for my comfort.

242. Have you had your attention directed to the prosecution of any of your Bedford dealers in other parts of England?—Yes; and it is surprising more have not been prosecuted.

243. Has the borough of Bedford, to your knowledge, any registry of the pig dealers within it?—The borough of Bedford call upon their inspectors to visit the pig establishments of these dealers two or three times a week, and they have to report. That is all the registry there is.

244. And do they furnish a return of the healthy or unhealthy condition weekly?—As far as they can. But those pigs are here to-day and gone to-morrow. They come in the morning, perhaps, and go off at night. I may as well say at once that I saw one of the inspectors for the borough this morning, and he told me that he had to do this. But you see they can altogether set them at naught; he said that they can have their pigs in one hour and send them out the next.

245. Have the penalties imposed by the magistrates or others at Bedford been of a deterrent nature?—I cannot speak as to Bedford, but, as far as the county authorities are concerned, their action has been deterrent, and rather a little too much so, in the opinion of some people.

246. Can you quote any cases where disease has been proved to have been communicated from Bedford to other parts of England?—No, I cannot particularise; but, as you know, this county is famed for spreading it about.

247. I should like you, if you could, to mention a case; I do not want to suggest a case to you if you will do it for me?—There have been several cases; there have been prosecutions of these men.

248. Can you name a county?—Staffordshire.

249. Have you heard of any in Cumberland?—Yes, in Cumberland, too.

250. Did you know of any case of a man being fined 2*l.*, with costs?—Yes, I have heard of several.

251. Is that man still carrying on his trade?—That man is carrying on a flourishing trade at this moment.

252. Could you now, to put it in a nutshell, tell us how to provide in the future to prevent the dealers of Bedford disseminating disease throughout the rest of England?—To manage the thing from headquarters.

253. Your desire is to transfer the duties at present performed by the local authorities to a central authority?—Yes.

254. And in reference to any payment for compensation, do you mean to say that that must also be made by the central authority?—What is for the good of the nation should be paid for by the nation.

255. What authority is to carry that out?—You do not put it into the hands of the local authority now to suppress pleuro-pneumonia; you do it from headquarters.

256. (*Chairman.*) What Sir Jacob Wilson wishes to bring out, I think, is this: you may throw the same duties with regard to swine fever which are now performed with regard to other cattle diseases on the Board of Agriculture, but at the same time the Board of Agriculture, as I understand, with regard to pleuro-pneumonia, for instance, has to depend very much upon the action of the local authorities, and we should like to bring out in your evidence anything you may be able to tell us from your experience as to how far that action has been successful, and any points of difficulty, for example, which may have arisen, because clearly the Board of Agriculture cannot itself be everywhere; it must depend upon somebody on the spot for a portion of its work. Who gives the first local information? That will bring out what Sir Jacob Wilson means. (*Sir Jacob Wilson.*) I meant that under any circumstances there are certain local duties which would still have to be performed by the local authorities. I take it that what is already done for other diseases could be done for swine fever?—Yes, certainly.

257. (*Mr. Shaw.*) You stated in your evidence that Bedford gave no compensation since 1890, I think it was?—Yes.

258. You seemed to think that when you gave compensation to the farmer or to the dealer there was an inducement to represent his pigs as being diseased when they were not?—I do not say that.

259. You conveyed that impression to me?—I did not mean that.

260. As matters stand, is the state of things as bad as this: there is a farmer who has got some few pigs off colour; he thinks he had better send off to one of these dealers to buy them from him; a man comes along and buys them at a very low price, and brings them into his yard at Bedford; gets them in by

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train, as you suggest. Suppose that dealer discovers, after he has bought these pigs, that they are diseased, what is his interest; is it his interest to report them to the sanitary authority, and have his place impounded, or is it his interest to distribute them to out-of-the-way places, possibly in Staffordshire or somewhere else?—It is his interest to distribute them right and left, because he would get nothing if he applied to the authorities.

261. Is it your opinion that the veterinary profession in general have a comparatively slight knowledge of pigs' diseases?—I should be very sorry to say that in general; I hope you did not get that impression from me.

262. I meant to say the ordinary run of the veterinary profession?—There are veterinary surgeons and veterinary surgeons, the same as there are pig breeders and pig breeders.

263. (*Mr. Carrington Smith.*) Are the parties who were prosecuted by the Staffordshire and Cumberland authorities the same parties?—I believe they all live in Bedford.

264. Do you ever appoint anyone as an inspector who has not the certificate of the Royal Veterinary College?—I think there was one man, but I cannot tell you. There are so many certificates required, and he could not qualify in one respect, I think; that was all. He was a very good local practitioner.

265. You suggest that the same course should be taken with respect to the determination whether it is the real disease as is taken with respect to the determination in pleuro-pneumonia; do I take it correctly, then, that you recommend that the internal organs of pigs suspected of swine fever should be sent up to be diagnosed by the central authority in London as they are in the case of pleuro-pneumonia?—No, I do not say that. I think that would be an unnecessary expense. I should like the Board of Agriculture to put their brand upon a certain number of inspectors and say, "Now, you are the men to diagnose this disease," where there is any question at all about it.

266. You are aware the same suggestion was made with respect to the diagnosing of pleuro-pneumonia that you have now suggested, and that it was opposed by the authorities of the Board of Agriculture in London, and the Board of Agriculture ultimately determined that the diagnosis should take place only in London?—That is a very different thing, I think. I am glad to say fewer cattle are attacked with pleuro-pneumonia than there are pigs attacked with swine fever. It would be rather a big order to send all up to London.

267. Supposing in case it was determined that certain veterinary inspectors in the country should be branded, as you say, by the Board of Agriculture?—Have their stamp put upon them; I will correct myself.

268. How would you arrive at the qualification for that stamp?—That would be for the Veterinary Department. They would send their best men out. I have no hesitation in saying that we have got some men, as superior men as you can find anywhere in the veterinary profession, and we have others who do not command the confidence of the people, and you cannot wonder then that remarks are made about it.

269. But then is it not an appointment by the Board of Agriculture if it is dependent upon the stamp of the Board of Agriculture, although it may be the appointment of a local man?—I do not care whose appointment it is, as long as it is done; that is what I want to see.

270. By the Board?—By the Board or any other authority. If they like to recommend men to the County Council to appoint we should only be too pleased. They should undergo an examination, in my opinion.

271. Have you formed any estimate in your own county with respect to the proportion of cases which you think are incorrectly diagnosed by the local veterinary authorities?—No, I cannot say that I have. I am only giving you what the public impression is.

272. That there are many mistakes?—I am glad to say I have only had a case of swine fever once, and that was in the borough of Bedford. I happened to be an occupier.

273. In any case you grant that many mistakes are made by local men?—I think so.

274. (*Mr. Stephenson.*) With reference to those pigs of yours that were affected with swine fever in the borough, were they pedigree pigs?—I do not think they were.

275. You said positively that the disease had not been prevalent amongst pedigree pigs?—I put that forward in this way, to substantiate what I said about the desirability of keeping animals clean. Where a man has a well-kept herd of pigs, I have not known of any instance where swine fever has broken out among them.

276. You do not pay any compensation in the county of Bedford; I take it that your police look after the infected places and return the number that are diseased or that die?—They do.

277. Do you pay for the disinfection and cleansing of the sties?—Yes, in some cases.

278. The county pays for that?—We do in some cases, and also in some cases for the burial of the pigs, but we do not give anything for them.

279. Is the disinfection of the places superintended by one whom you have faith in, and can thoroughly rely upon seeing it well done?—Yes, that is done by the inspectors of police from the various petty sessional divisions.

280. What training have they which qualifies them to thoroughly disinfect a place?—None, except in riding about the country with our veterinary inspectors, or the veterinary inspectors with them. That is all their training, I believe.

281. Now, you spoke about having certain men appointed by the Board of Agriculture, guaranteed by the Board of Agriculture; I take it that you mean guaranteed as qualified to handle swine fever as veterinary inspectors. Now, if that was done, who would you expect to pay the salaries of these men?—I should wish to explain myself. I want the Board of Agriculture to appoint as these inspectors men who are, perhaps, resident with us. You must not understand that I wish to import a lot of strangers into the neighbourhood, but I want the Board of Agriculture so to let the heads of the Veterinary Department be satisfied with the knowledge that these men possess of their art before they are made inspectors. Perhaps I have not made myself understood, as I wish to do. I merely wish for swine fever to be treated on all-fours the same as you are treating pleuro-pneumonia.

282. If you desire the Board of Agriculture to nominate and appoint inspectors, instead of the local authorities, who will be expected to pay them; that is the question?—The local authority.

283. (*Sir Jacob Wilson.*) Should the local authority, when they want an inspector, submit him to the Board for approval?—That is my point. I only want him to have the stamp of the Board, as it were, as being a man capable to declare these diseases.

284. (*Mr. Stephenson.*) I take it that we are all of one opinion with you that the want of uniformity is the great cause of the spread of this disease?—There should be uniformity of action throughout the country. I think I have demonstrated that pretty clearly to-day between the borough and the county of Bedford. Not only that, but these pigs can be sent from John-o'-Groats to Land's End without any question being asked by the railways, and that, to my mind, is the great drawback to the whole thing.

285. If, as I believe has been done by Northumberland and the city of Newcastle, to schedule Bedford,

would that include the borough of Bedford?—I do not know whether it would, because the borough is a separate authority. If it is so I cannot understand why these pigs find places throughout the country as they do; 200 a week are going out of Bedford crowded into little crates, and sent everywhere.

286. Is there swine fever in the borough of Bedford now?—I do not think there is just at this moment.

287. But you say it is raging in the county?—Well, it has increased in the county.

288. Just one thing more as to value; it is quite an ordinary thing to find pigs worth 6*l.*, 7*l.*, and 8*l.* a-piece now, is it not?—Yes.

289. And you would give three-fourths of that value?—I have not thought the matter out. That question came very suddenly upon me, but I thought that would be about an equitable thing to do. I think the man should suffer a little and the country suffer a little.

290. If the pig was diseased, would you think 2*l.* sufficient, seeing that the pig was going to die in a day or two for certain; but if it was a healthy pig in contact, do you not think that the in-contact healthy pig should be paid for full value, there being a different valuation for the diseased pig?—It is only a matter of time, you see.

291. It would be all done in a day?—The disease would make the one of less value.

292. That is the law we have been working on for a long time, namely, that no healthy pig is to be valued at more than 4*l.*?—It would be a very hard thing for a man not to be paid for his diseased pig if the pig had caught the disease from his neighbour.

293. Would you have two valuations, a valuation for a diseased pig and a valuation for a healthy in-contact pig?—I think they should all be put at one value.

294. What would be your limit of value?—I say I would give them three-fourths.

295. Three-fourths their full value?—Yes.

296. What about the salvage?—There is no salvage in these things.

297. Not in those, but what about the healthy ones?—They are all sold to a disadvantage if they have been in contact.

298. (*Mr. Wardlaw Ramsay.*) You have just stated that you would recommend three-fourths of the value as compensation; do I understand that you mean the market value, or would you allow pedigree value in the case of a valuable pig?—No, I should put pedigree out of the question there.

299. In the early part of your evidence you stated that in Bedfordshire you had abandoned the principle of compensation in the year 1890, I think?—I could not say positively when; I think it was before that.

300. At any rate, later in your evidence you stated that you thought it was essential that compensation should be paid; I presume you mean on the understanding that those other recommendations which you have been making go along with it?—Quite so.

301. Then you also said there was little or no inducement to policemen to look after or report swine fever, because they were not paid for doing what was really an extra duty. Supposing they were paid, could they find out disease then; what opportunity have they got; would you insist upon the compulsory notification of disease?—All those things creep out, I can assure you; no man in the parish would have a diseased pig but what it would be talked of at the village corner some time or other, and the policeman can do as he likes about listening, stopping or unstopping his ears. I fancy, if he were paid for looking out a little more, his ears would be a little more open than they otherwise would be.

302. I think you stated that there had rarely been any cases, or that perhaps there had been no cases, of swine-fever in what are known as pedigree herds; in your experience does that apply to breeders of pigs as opposed to feeders; I mean to say, in your experience have there been fewer cases in the case of people who are independent of importation of animals than in the case of people who import their animals to feed?—I merely made that statement to show that where animals were kept cleanly, and every care taken of them, both in food and in cleanliness, there was less susceptibility to disease.

303. What I wanted to get at was this; take yourself with your herd self-contained; you have your own boar, and you have no occasion to go outside at all; all that you do is to send pigs out. Your neighbour keeps no boar, breeds no pigs; he buys his pigs from another market, brings them in, and feeds them. Is it in your experience that it is in the latter case that swine-fever is most prevalent, or do you find that in cases where the herds have not intercourse with the outside world?—I think swine fever is more prevalent with the small occupiers, although I should be very sorry to say a word, especially in these times, against them.

304. The small ones?—Yes, that is where the disease, in my opinion, in our own county has been more prevalent amongst the small occupiers, who have not the means and advantages of keeping those animals. They have frequent changes with them as well; they go into the market more frequently.

305. Do I understand you to mean persons who keep, perhaps, one or two pigs?—They keep more. A great many of our labouring men and small occupiers keep two or three sows, and breed pigs.

306. Are there in Bedfordshire large pig-feeders who keep, say, 200 or 300 pigs?—Yes, there are some who keep 200 or 300 pigs, and I may say that I think there is no county in England where so many fat pigs are fed as in Bedfordshire.

307. Is it in the piggeries where they keep large quantities that the disease occurs?—Not so frequently, I believe, as where I have stated.

308. Is the disease more prevalent at one season of the year than at another?—I think that we have had more disease in the summer months than in any other months.

309. (*Sir William Kaye.*) Are your veterinary inspectors permitted to take private practice?—Yes, they would not live without it. We do not give our veterinary inspectors much money, I can assure you.

310. (*Chairman.*) I would just ask you one question with regard to the qualification. I suppose the tendency is for the inferior inspectors, those whom you spoke of just now, to gradually disappear; I suppose they were gentlemen who had places which were saved by the Act of Parliament, that they were persons having a vested interest, and that they will gradually disappear?—They do; but as far as we are concerned in Bedfordshire we have no very great fault to find except in the one case which I named. Young fellows of the veterinary profession are made inspectors before they have had sufficient experience.

311. Is there any rural land, farm-land, within the limits of the borough of Bedford?—For 45 or 46 years I have occupied a farm of 100 acres in the town of Bedford, and I have some of the most ancient farm-buildings in England in my farmyard. They were built in the time of William the Conqueror.

312. Can you give us any idea what amount of rural land there is within the borough?—I think we have in Bedford about 2,000 acres in the borough.

313. Therefore, to all intents and purposes, Bedford is not a strictly urban community; it is partly a rural district?—I can remember it when the whole population was dependent upon the surrounding rural population; now, in consequence of 14,000*l.* a year being expended in education, families from all parts of England and from India, and everywhere else, come to live in it.

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314. I want to ask you a question in regard to one of your last answers about the prevalence of disease amongst the small holders. Has any attempt been made amongst the small people in Bedfordshire, as in other counties, to form pig-insurance societies?—We have a pig-insurance society; there is nothing at all elaborate about it; but amongst our villages they have established what they call a pig club, and I believe it has been of great use to the men.

315. Has it been found possible to put them on a good basis?—Yes; my foreman happens to be the foreman of a club, I believe, and he tells me that it has been a great boon to the men in the place.

316. I suppose it is a very great advantage in this way, that it gives these men every inducement; if they have proper rules, that is to say, to keep their pigsties in good order?—Yes, of course, it is.

317. I suppose they all have rules to the effect that they do not get insurance money if neglect can be shown?—I am not aware of the precise rules that they have. I can only speak generally, that they seem to think it has worked well.

318. Has any attempt been made to carry that beyond the small holders; have any of the larger men ever insured pigs on a large scale?—I have not heard of it.

319. (*Mr. Joseph Smith*). In your own case, where you had disease among your own pigs, could you trace it to anything?—I could not for the life of me trace it to anything whatever. They were sent over from my Biddenham farm to this Bedford place, and it broke out there. How it could be communicated I cannot say, but it was declared to be swine fever, and the pigs were buried, and I had nothing for them. Perhaps you will allow me to say that I had this this morning from one of our inspectors: A small pig, evidently having swine-fever, was on the Bedford platform for several hours; it was a returned pig to one of our Bedford dealers, he refused to take it in, and it was therefore buried on the railway.

320. (*Sir Jacob Wilson*). Was that information received from a veterinary inspector?—Yes; he saw it.

321. (*Chairman.*) When did that happen; what was the date?—I cannot give you the date.

322. You can put it in your evidence afterwards if you have the opportunity?—Yes. Then there was a truck of pigs sent from Banbury to Bedford, one sow was dead, and the other pigs, I suppose they were small pigs, were in so bad a state that the consignee refused to take them, and paid carriage back to Banbury. That is how things go by railway.

323. (*Mr. Carrington Smith.*) Will not the local authority of the district in which the pig was buried prosecute the parties who buried the pig on the railway for not giving notice?—You see they do not happen to know it.

[The Witness withdrew.

PROFESSOR WILLIAM DUGUID, re-called; and further Examined.

Professor William Duguid.

324. (*Professor Brown.*) You have stated that swine-fever is contagious?—Yes, I have every reason to believe so. I think it is generally admitted that it is so.

325. There is evidence, is there not, that animals have been put into pigsties six weeks after diseased pigs have been taken out of them, and that those animals have taken the disease?—Yes, there are several instances of that kind on record. An instance of that kind occurred once at the Brown Institution, where the place was supposed to be thoroughly clean and disinfected. Fresh pigs were brought into a portion of a stable where there was an asphalted floor. The woodwork was perfectly new and had all been scrubbed and cleansed after the diseased pigs were removed. The fresh ones were brought in several weeks afterwards, and contracted the disease in about eight or ten days. The only source of infection I could find in connection with it was the infective material lying still in an active state in the drain traps.

326. (*Mr. Carrington Smith.*) Inside the building?—Inside the building. It was a stable in which there was a concrete floor and a trap drain in each stall. The diseased pigs were kept in one of those stalls. The place was cleansed and disinfected afterwards, as we considered, thoroughly, which evidently was not the case. The only source of infection I could trace afterwards was simply the trap drain.

327. (*Professor Brown.*) Has the disease been introduced by inoculation?—Frequently by inoculation.

328. And by mixing the infective material with the food?—Yes, those experiments were conducted in 1876 and 1877.

329. Does it manifest itself in an obscure form, so that there are no indications of it in the living animals?—Frequently, in many outbreaks of swine-fever, the external manifestations of the disease are absent; that is to say, there is no discolouration of the skin, and some have it in a mild form, which would escape notice at first.

330. In that particular, does it resemble any other disease with which the Board of Agriculture has to deal?—With regard to pleuro-pneumonia, you have got the difficulty of diagnosis in the living animal, and just in the same way you have it with swine-fever.

331. That is to say, you may kill an animal which, to all appearance, is perfectly healthy, and find that it has swine-fever?—Yes, quite so, and, on the other hand, you may kill an animal that you suspect of having swine-fever from the discolouration of the skin, and find that there is nothing of the kind there.

332. Then the diagnosis of the disease from the early symptoms is by no means easy?—It is extremely difficult. My own experience is that unless you make a *post-mortem* examination you can never be certain that you are dealing with swine-fever in the early stages of an outbreak.

333. It is the custom, is it not, that the inspector has to declare the existence of swine-fever before he slaughters the animal?—Yes, that is the rule.

334. And then he has to make his *post-mortem* examination?—He has to make the *post-mortem* examination afterwards.

335. Then it is somewhat excusable that the inspector frequently makes a mistake?—It is certainly excusable.

336. Has the disease been produced by inoculation or feeding with the bacillus of swine-fever?—The disease has been produced by inoculation from the cultivations in the laboratory, and the mixing of the cultivations with food too, I believe, has been successful in producing the disease.

337. You are aware that the virus has been cultivated in various ways and used for the purpose of protective inoculation?—It has been so in the United States I believe, but I am not aware of it having been done in this country; that is to say, not to be effectual.

338. Is there any evidence as to its action in the United States which would lead one to recommend its adoption here?—I think not; from the reports that I have read of Dr. Salmon's I do not think it could be recommended here.

339. So far as we are aware from the experiments that have been made here, and from records of ex-

periments in the United States it has been a failure ?—Yes, so far as I am aware, it has been a failure.

340. Are there any other diseases which are somewhat closely allied to swine-fever in their symptoms ?—You have that diseased condition, gastro-enteritis; produced by brine poisoning, which in many cases simulates the external appearance of swine-fever.

341. Are there any contagious diseases of swine which resemble swine-fever ?—The disease generally known on the Continent as rouget, certainly, from the descriptions given, is extremely like swine-fever in its symptoms.

342. Have you any reason to believe that that disease or a similar disease has been met with in this country ?—Certainly there is some reason to believe that cases have been met with in this country.

343. Is that disease fatal like swine-fever ?—I am not quite aware of the fatality that attends the outbreaks of rouget, but I believe it is a very fatal disease.

344. And it is contagious ?—Yes.

345. Then, so far as the administration of the law is concerned, it is not a matter of any great importance if the inspector calls erysipelas, or rouget, "swine-fever" ?—Certainly not, from a practical point of view ; they ought to be dealt with in the same way, as they are both contagious.

346. Is swine-fever a very fatal disease ?—In my own experience it is a very fatal disease.

347. Then there are not many recoveries ?—There are not many recoveries, more particularly amongst young pigs. The recoveries that I have seen have been mostly in older pigs which resisted the disease, lingered on for some considerable time, and ultimately recovered.

348. Then how do you explain the frequent recurrence in the reports of the Department of large numbers of recoveries in districts where the local authorities do not slaughter ?—The only explanation of that I can offer is that other diseases of a less fatal character are accepted as swine-fever.

349. Is swine fever very widely spread geographically ?—It is very widely spread.

350. Does it exist in any of the countries from which we import animals ?—We have had importations of animals affected with swine-fever from the United States of America ; on one or two occasions from Canada ; and we have had them brought from Denmark and from Germany ; in fact, the disease is prevalent over the whole of the Continent of Europe, and in the United States.

351. In what way are we to protect the country from the introduction of swine-fever from abroad ?—The only protection we could have would be slaughter at the ports of landing, and seeing that the offal of all pigs brought there was properly dealt with to prevent infection escaping from the Foreign Animals Wharves.

352. And that is practically done in reference to those countries from which swine-fever has been imported, or in which we know it exists ?—That is practically so.

353. I gathered from your evidence in chief that you attach more importance to the stoppage of movement than to slaughter ?—Yes, that is so ; so far as experience from the working of the Orders of Council and the statistics would show, the stoppage of movement has been more efficacious than slaughter, but perhaps there should be a judicious combination of the two. When that compulsory slaughter Order was in force, the restriction of movement was withdrawn. If the two Orders had been worked simultaneously, the results might have been much better than were obtained.

354. It was the case I think at that time that the stoppage of movement caused so much disturbance that slaughter was substituted for it ?—Yes ; that was, I believe, the reason why slaughter was substituted.

355. And as soon as it was found to be a complete failure at the end of about three months the Order was, I think, revoked ?—It was revoked.

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356. But during the time of its operation was it the case that local authorities would sometimes slaughter the diseased pigs in one sty out of ten in a large yard and leave the rest alone ?—Several cases of that kind were brought to our notice by the travelling inspectors.

357. So that the Order was not carried out so far as its intention was concerned ?—No, it was not carried out in the spirit in which it was intended.

358. The local authorities in some counties neglect to slaughter the animals now, and have done for some time ?—They have done for some time.

359. Do you take this to be an indication of their lax administration, or does it arise from a feeling, which a witness has just explained to us, that it is quite useless to slaughter animals in one district when all the districts around neglect to take those precautions ?—I think from all I can learn from the manner in which the work is carried out in those counties the local authorities consider it a waste of money to slaughter and pay compensation when their neighbours are allowing the diseased pigs to live and spread the disease.

360. And the result of ceasing to slaughter and compensate invariably is to diminish the number of reports ?—It would appear to from all the evidence we have on the Returns.

361. Does the owner of a diseased pig run much risk of being found out, do you think, if he does not report ?—Very little indeed, unless some of his neighbours inform the police, which is not very likely. He may keep diseased pigs on his premises for some considerable time without anybody knowing it.

362. And so far as the evidence which is before the Board is concerned there are a great many cases where people are summoned for not informing of swine-fever ?—They are only summoned occasionally when the disease has been spread from their premises to some others in the district of the same local authority or of an adjoining one.

363. And it is highly probable that the owner of one or two pigs would find it more convenient, if they were attacked with swine-fever, to kill them and bury them and get some more than he would to make a report, knowing that his pigs would be shut up till they recovered or died, and that he would not be able to get any more in for perhaps some weeks ?—It would certainly be better for him to run the risk of being found out than to give notice. If he gave notice his pigs would be shut up until they died or recovered, and then his premises would be shut up for at least another 28 days before he could get fresh animals into the sties.

364. I will put to you the question that was put to me before one of the Parliamentary Committees : Does it, in your opinion, amount to bribing a man to tell the truth when you give him compensation for giving notice ?—I do not know that it actually amounts to bribing a man, but it is a great incentive to him to come and tell the truth.

365. It gives him an inducement ?—It gives him an inducement.

366. Do you think it is desirable, is the next question, to bribe a man for that purpose ?—If you really wish to find out the whole of the outbreaks of swine-fever in the country, I think the payment of compensation for the diseased animals is the only inducement you can offer to obtain the information.

367. Therefore it is desirable to pay people to let you know that they have disease ?—Quite so ; otherwise you would never be able to get at the original centres, and so be able to eradicate the disease from the country.

368. On the whole, from this system of bribery, or compensation, or whatever you like to call it, the results are good ?—The results have been good. Undoubtedly, with regard to dealing with pleuro-pneumonia, if

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there had been no compensation given, the disease would still exist in the country the same as ever.

369. Are you aware of the impression that got abroad very early during the administration of that Act as to the kind of compensation which would be paid ?—I think the impression very soon got abroad that the valuation of the animals would be made on a liberal scale, that is to say, that the owners would get full compensation, at least market value, for all the healthy animals, and half market value for the diseased ones.

370. The result of that was, probably, that a number of persons volunteered a statement that they had disease on their premises who would otherwise have kept it quiet ?—Yes, and in fact a number of reports of cases of pleuro-pneumonia turned out to be wrong. We got, perhaps, six or seven reports of suspected cases for one genuine one soon after we began to slaughter and compensate.

371. Then it comes to this: that by giving fair valuation and promptly paying, you rather encourage people to state the existence of disease when it turns out that it did not exist ?—Yes.

372. Then, in connection with that system, would you suggest that special care should be taken to identify the disease before any further action is taken ?—I think it is absolutely necessary, unless you are to allow every inspector throughout the country to slaughter and make his own report as to the *post-mortem* appearances. I think it is absolutely necessary that some check should be put on the expenditure in that direction.

373. Would you recommend that the same course should be adopted as was adopted with pleuro-pneumonia ?—I am afraid that that would be impracticable on account of the enormous staff that would be required to carry it out.

374. Might it not be the case that a modification of a suggestion of the last witness should be adopted, and that certain men in different parts of the country who are known to be quite familiar with the appearances of swine fever should be selected, and that the parts should be sent to them ?—Yes, that might be worked. If you were to modify the pleuro-pneumonia system of working it would become a practicable scheme then.

375. At any rate, something must be done for the purpose of making it quite clear that the disease which is said to be swine fever is swine fever ?—That is absolutely necessary before any further steps are taken when a report is received.

376. Do you happen to recollect where one county asked permission to send specimens to the college, where they had reason to doubt the prevalence of swine fever to the extent that it seemingly existed ?—There are several cases in my recollection of local authorities requesting assistance of that kind, either at the college, or they have sent specimens frequently to the office asking for opinions as to whether it was swine-fever or not.

377. Do you recollect a case in which 17 specimens were sent up in quick succession, and only three of them presented any sign of disease at all, and in those where the symptoms were only just sufficient to lead to a mere suspicion of swine fever ?—I cannot say that I recollect just for the moment those particular cases, but I can remember a number of cases in which the viscera of pigs was sent up, and no trace of swine fever found.

378. Then it certainly would be necessary if the central authority undertook to extinguish swine fever, that they should, at any rate, commence in each case by making themselves perfectly satisfied that the disease really does exist ?—Yes, I think that it would be absolutely necessary to do that.

379. And to insist upon themselves, or through the agency of their officers, getting this knowledge, would be in accordance with the ordinary practice of the veterinary and medical profession, would it not ?—Yes, with regard to the verification of the existence of disease before further action was taken.

380. That is to say that a man does not certify to the existence of a disease, or of a defect on the evidence of some other person, however eminent that other person may be ?—That is so.

381. Would you recommend, speaking generally, with reference to the dealing with disease, that steps should be taken at once over the whole of the country, or would you take portions of the country and eradicate the disease from those portions, in the first instance ?—The eradication of the disease by taking portions of the country would be a matter of very little difficulty, provided you had restriction of movement placed on the whole country at the same time. For instance, now, in Scotland there are only about two or three counties in which the disease has maintained a permanent existence for two or three years, and it would be an easy matter to get rid of it there; but take, as another instance, the West Riding of Yorkshire, and some of the adjoining counties, where you have from 300 to 400 outbreaks reported in a year. It would be a very difficult matter indeed to adopt the principle of slaughter over the whole country at once, on account of the enormous staff that would be required to carry it out. Restriction of movement does not require any very large staff.

382. Then you would recommend that, so far as the whole country is concerned, movement should be restricted ?—Yes.

383. While in regard to certain portions, beginning with those where the disease is less rife, those other measures might be taken for the purpose of stamping it out ?—Yes, I think the restriction of movement would be the first thing to adopt over the whole country, and then the question of slaughter might be considered afterwards as to the portions of the country in which slaughtering should be adopted and carried out first.

384. And you think that would be more economical and more easily administered than trying to extinguish the disease suddenly ?—I am sure it would be less difficult, and I believe it would be more economical really in the end.

385. Is it your opinion from your experience that the assistance of local authorities is absolutely necessary in dealing with this disease or with any contagious disease ?—Without the assistance of local authorities the Board would be comparatively helpless. We require the assistance of the police, more particularly with regard to getting information for us, and seeing that the regulations are enforced.

386. In fact, without the concurrence and help of local authorities it would be utterly impossible that any effectual step could be taken ?—It would be utterly impossible.

387. Have you thought at all upon the question of the possibility of getting rid of the disease ultimately ?—I think it would be quite possible to get rid of the disease ultimately, after a considerable length of time, probably, and with a considerable deal of work. The stoppage of importation, of course, would cut off the source of infection from anywhere to our own country.

388. But you do not see that the thing is at all a matter of impossibility ?—I do not see that it is a matter of impossibility; it is a question of time, trouble and expense, really.

389. (*Sir Jacob Wilson.*) Will you give us, as nearly as you can, the date when swine-fever was first known in this country ?—We have no record of its first introduction into this country; but in 1865, when the late Dr. Budd, of Bristol, read a paper before the Royal Agricultural Society, he stated that the disease had been known for some years to the dealers and curers in the West of England, Wiltshire, and all that district; but no date seems to have been fixed as to its introduction into the country, nor as to the source from which it came.

390. We have a right to assume, therefore, that it was prior to 1862?—Certainly. I think it was before 1862, because Professor Simmonds describes a contagious disease amongst pigs in Berkshire in 1862, which was evidently swine-fever.

391. Now, you have traced the history of the disease up to the present time, I think generally. During the whole of that time, to which you have referred, was the disease being imported from foreign sources?—During the greater part of that time the disease was being imported every now and again. The first instance of the importation of swine fever in 1879 was in the early part of the year when we imported several cargoes from the United States into Liverpool. The American pigs, up to the time of the discovery of the disease, had been freely admitted into the country. The American cattle were scheduled for slaughter in the beginning of March, and the pigs were not scheduled for slaughter until May, consequently between March and May, and previous to March, they had free inlet into the interior of the country.

392. Swine fever has always been in existence, more or less, in America, I believe?—The earliest published accounts of it in America were, I think, about 1858, by Dr. Sutton, of Indiana. He wrote a report on contagious swine plague, which existed in some parts of America at that time. It was evidently swine fever; there might have been something else mixed up with it; but certainly swine fever existed there at that time.

393. Has it been more or less continuously introduced up to the present time from America?—No, I do not think we have introduced it from America. None of the American pigs have been allowed to get into the interior of the country. They have all been slaughtered at the ports of landing since the beginning of 1879.

394. Have you any means of knowing whether swine fever exists in Canada?—We had on one occasion or two occasions pigs imported from Canada with the disease, but we have no evidence at the present time showing that the disease exists in Canada.

395. Am I right in assuming that it is generally in existence throughout Europe?—Yes, we have Consular reports from different parts of Europe, in which it is frequently stated that swine fever exists, or that swine erysipelas exists, as well as other contagious diseases of other animals. In Denmark, for instance, we seldom have a return from there in which there is not some mention made of swine fever.

396. Are the present regulations for the exclusion of disease in cattle and sheep in favour also of preventing swine fever from being introduced?—Yes, the regulations in force would prevent the introduction of swine-fever.

397. (*Chairman.*) The existing regulations?—Yes.

398. (*Sir Jacob Wilson.*) You referred to an outbreak in the New Forest. Had you an opportunity of making a personal inspection of that outbreak?—Yes, I spent two days in the New Forest at the time, and made a *post-mortem* of several of the pigs. The first of the pigs found affected with it had been buried before I went down there, and I had the carcases dug up and examined them, when I found that they had been infected with swine fever. The owner of the pigs was found, and pigs belonging to him and one or two of his neighbours were found in a group, keeping by themselves, as they usually do there. These pigs were collected and slaughtered. Then there were some cottagers within the Forest who had outbreaks of swine fever afterwards, but there was no general spread of the disease in the Forest.

399. Do you attribute the existence of swine fever in this country to any great extent to fraudulent concealment?—I cannot say to what extent it is concealed, but there is every reason to believe that there is a considerable amount of concealment in several districts from the simple fact that we hear of outbreaks in other districts, attributed to pigs taken from centres where "no disease" has been reported only a few weeks before.

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400. You are under the impression that that is in some measure due to the want of liberality in the matter of compensation?—I think it is almost entirely due to that, with the exception of dealers. In the case of dealers giving information, however well they might be compensated for the pigs on their premises, if their premises were shut up that would certainly ruin their business. But taking cases apart from those of dealers I think that by the payment of compensation you would get the whole of the cases reported.

401. Are you aware of the maximum value at present existing in the Order?—Yes, I am quite aware of that.

402. Would you recommend any addition to the amount named therein?—There have been several communications received by the Board of Agriculture urging that the maximum compensation was too low.

403. May I ask whether those communications have been made within the last six months?—I do not remember any within the last six months. I remember several previous to that.

404. I suppose you are aware that the pig trade is pretty lively at present?—The pig trade is better than it has been for a considerable time; prices are better.

405. The market price of a pig is much higher than it was twelve months ago?—Very much higher; prices have considerably improved compared with what they were this time last year.

406. Now you have stated to the Committee that great difficulties exist in diagnosing the disease?—Very great difficulties do exist.

407. Take an ordinary outbreak of the disease, at what stage of that disease would you generally detect it from external appearance in the living animal?—You might in the course of the very first few days get a well-marked case, and probably in another outbreak it would be only in the second or third pig which became infected that you would have decided external symptoms.

408. You have stated also that it is a very fatal disease?—Yes, it is fatal so far as my experience goes.

409. You have also stated that only about eight to ten per cent. recover?—That is so.

410. Have many attempts been made to cure the disease by treatment?—Many attempts have been made; in fact, prior to the Order constituting it a disease under the Act of 1878, all the diseased pigs were treated more or less either by their owners or by somebody who was supposed to be skilled in the diseases of pigs.

411. But, is it not the fact that, in consequence of the comparatively small value of the animal, this disease has seldom been treated, the owner preferring to slaughter?—I believe that is so. I believe there are a great number of cases where the owner, when he sees anything the matter with his pig, has it killed, and, if it dresses out with a marketable appearance, it is sent to market and sold, or, if not, buried.

412. That would be to a larger extent therefore than if the animal had been a cow?—Much larger.

413. Now the want of uniformity is obviously, from your evidence, the chief cause of the disease not being extirpated?—The want of uniformity of action has been the drawback to exterminating all the contagious diseases. Uniformity of action is necessary.

414. And, therefore, your view would be that, whilst slaughter alone would not effect the purpose of exterminating the disease, slaughter with regulation of movement would?—I believe the two combined would.

415. Would you add to that an increase in the

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compensation ?—Yes, an increase with regard to the maximum to be allowed.

416. You are aware that during the last 20 years other diseases have been stamped out in this country ?—Yes, foot-and-mouth disease has been stamped out, and pleuro-pneumonia.

417. Is there any good reason why swine fever should not be equally successfully stamped out ?—There is no reason why it should not be stamped out. It would be more troublesome in working out the details, but there is no reason that I can see why it should not be stamped out the same as others.

418. By arrangements similar to those in the case of foot-and-mouth disease ?—Yes, stoppage of movement, slaughter, and the disinfection of premises, and so on.

419. (*Mr. Shaw.*) You mentioned about the difficulty with regard to dealers ; have you any scheme in your head as regards dealing with this particular matter ?—No, I have not at the present moment. I do not see what scheme could be applied to dealers specially. When you come to deal with certain individuals and treat them differently from other people it becomes invidious. I do not see that anything could be done with regard to the dealers more than with regard to others. They would have to be dealt with with the same liberality, and probably that would be an inducement to them to give information of the disease more than they do at the present time.

420. There is a theory in Ireland among the small farmers that the appearance of swine fever in Ireland was contemporary with the introduction of Indian corn ; that was about the year 1847 or 1848, after the Irish famine. Have you any grounds for believing such a theory ?—I have heard the same thing stated with regard to outbreaks of disease here. Only recently a veterinary surgeon, who is an inspector of a local authority, told me that we never would eradicate swine fever from this country so long as we imported and allowed foreign grain to be used for food for pigs.

421. Is it not possible that the constipating effect of Indian corn upon the system of the pig, thereby inducing a certain amount of congestion of the system, produces a liability to contagion, an exaggerated disposition to infection ?—I do not think that any amount of constipation would produce the disease, but anything that interferes with the pig's health would naturally render him more susceptible were he brought in contact with the virus. It is not at all impossible that certain kinds of meals, and Indian corn or other meal might be contaminated with the virus of swine fever and carry the infection.

422. In your opinion how soon does a pig which is infected with disease become an infectious animal ; in other words, how soon can it communicate this disease to others ?—With regard to animals which have been inoculated, you usually find symptoms within about four or five days, and the pig would consequently, immediately he began to cough and show decided symptoms of the disease, probably be infective. In cases where pigs get infected in markets or in transit the buyer seldom finds out that there is anything amiss with the pigs that he has bought until a week or ten days after the purchase. About a week or ten days is the usual time, from that to a fortnight, before he discovers something amiss. But with regard to inoculated pigs you find the symptoms produced earlier, because the pig that gets infected in the natural way might get an infinitesimal dose really of the virus ; whereas to the pig that you infect you give a quantity.

423. I suppose, in your compensation scheme not only would you give compensation for the slaughter of the diseased pigs, but also for those which have been in contact ?—Certainly, slaughtering the diseased pigs only and paying half compensation, or whatever it may be, for those would be very unfair to the owner, because his contact pigs would be left gradually to become infected, and he would only receive half instead of full compensation for the remainder of his pigs. What I should think would be the proper thing to do would be to slaughter the diseased pigs, pay a certain amount of compensation for those, and to slaughter those in contact and pay full compensation, full value for all those that have been in contact and were not diseased.

424. (*Mr. Carrington Smith.*) You do not think the disease can be originated by bad food, or by insanitary arrangements, but you think it would only be increased in its virulence ?—I am quite satisfied in my own mind that it cannot be produced by insanitary conditions, but its virulence may be intensified.

425. Would you recommend that any sanitary inspection of pigsties should be carried out by the local authority in case we applied some regular treatment of the disease ?—The question of pigsties is a very difficult one indeed, so far as getting rid of the disease is concerned, and from my own knowledge of the condition of the pigsties throughout the greater part of the country, it would mean almost reconstruction where you get disease. It would mean not only inspection, because inspection would be of little value unless you enforce some stringent regulations with regard to reconstruction.

426. What period of vacancy of infected premises do you consider necessary before they can be restocked with a fresh lot of pigs ?—Certainly not less than two months.

427. That is more than is generally allowed by local authorities ?—Quite so. It has usually been put down at 28 days, but I think it would be much safer to extend that to 56 days before allowing anything to enter, and even then to have it only done where the premises have been properly cleansed and disinfected.

428. Can you not slaughter on suspicion under powers given by an Order now in existence ?—No, you cannot slaughter really, and you are not justified in slaughtering on suspicion. You have to make a declaration that the disease exists.

429. Was there not an Order giving you that power ?—There was an Order by which local authorities delegated the power to the inspectors to do it ; but it has fallen through, and there is nothing of the kind being done now. If a man makes a mistake now about swine fever in diagnosis for the local authority, he will not admit that the mistake has been made probably.

430. (*Chairman.*) Are you alluding now to the Order of 1885, which provided that any local authority might, if they thought fit, during the month of February, cause to be slaughtered all swine within their district suspected of swine fever, or of being in an infected place ?—Yes.

431. How long did that last ?—I do not remember the exact time it lasted.

432. (*Mr. Carrington Smith.*) We tried to work it and could not work it ?—I think it was found in many cases to be unworkable. Local authorities gave their inspectors power to act under that, and to slaughter suspected animals, and they did find in several districts that it did not work satisfactorily.

433. In case some regular system of authorising inspectors with respect to making *post-mortems* should be agreed upon, what organs should you recommend as necessary to be submitted to the *post-mortem* examination ?—The lungs, stomach, and intestines.

434. All three ?—They would all be required, the whole of the digestive organs, and the lungs.

435. Then there would be rather more difficulty in sending to one central authority the suspected organs than in the case of pleuro-pneumonia ?—Very much more so, and a danger would there arise, if they were not properly packed, of the infective material being scattered about. The packages would have to be sent too in a more careful manner than in sending the lungs in a case of pleuro-pneumonia.

436. Because there is no risk in pleuro-pneumonia?—There is no risk whatever of pleuro-pneumonia being spread by the lungs being sent from place to place; but in the case of swine fever the infective material may escape from a jar or box in which it has been packed into a railway van where probably other things will be carried afterwards or into railway trucks.

437. Then you would not recommend a similar transference by rail of the organs in cases of suspected swine fever?—Not without special arrangements for it.

438. What process of disinfection do you recommend in cases of dealers' carts or other vehicles in which pigs have been carried?—A thorough washing and scrubbing with water, and then the application of carbolic acid and water afterwards. After the cart has been properly washed in the ordinary way, wash the cart again with carbolic acid and water.

439. In case it should be placed within the power of local authorities to lay down certain regulations with respect to pigsties and cowsheds, would you make it one of the conditions that there should be no internal drains inside the pigsty?—If the authority was given, certainly there should be no drains inside the pigsties; in fact, in pigsties, cowsheds, and all places where animals are kept, the drainage should be surface drainage until outside the building.

440. The same sanitary regulations should apply to all animals?—That is my opinion.

441. Have you seen any affinity between sewage fever and swine fever in pigs?—I cannot say that I understand what sewage fever means in pigs, having seen nothing amiss with pigs on sewage farms.

442. When I said sewage fever, I meant fever that might be induced by internal drains being stopped, and that the illness of the pigs might take upon itself something similar to that which is clearly seen in cases of swine fever?—I have no experience in that direction; I have never seen anything of that kind.

443. (*Mr. Joseph Smith.*) You gave us to understand that there are a good many cases in the country which are not reported at farms and other places where the pigs are kept?—Yes, I believe so.

444. Do you think there is sufficient inspection in the markets?—In many of the markets the inspection is almost, you may say, *nil.*

445. You think that diseased pigs may go to market?—The infected ones may go to market, and sometimes actually diseased ones may be exposed in markets. The inspection of markets is not very strictly carried out in many parts of the country.

446. You said this morning that you thought generally bad management had a good deal to do with the disease, but I gather, as you told us just now, that you do not think it produces it?—I do not think it produces it.

447. (*Mr. Stephenson.*) I take it you will agree with me that pigs may be affected with swine fever without showing definite symptoms of it?—Quite so. I have seen many cases myself in which, without a *post-mortem* examination, I could not have certified that the pigs had swine fever, although I had suspicions of it.

448. And failing that, hence the inspection of markets is not much good?—The inspection of markets is not much good with regard to the detection of disease, but there is certainly a good deal to be said in favour of the inspection of markets, because it deters people from bringing diseased animals into the markets.

449. But the pigs might be there and pass the inspector?—Yes, they might be there.

450. That is the fact?—Yes, that is the fact.

451. We know it does not matter what ails a pig, his skin becomes discoloured, as a rule?—As a rule that is so.

452. In your opinion is a discoloured skin diagnostic of any special disease?—No, it is not diagnostic of any disease that I know. I have seen it in different diseases of the digestive organs of the pig, and in brine poisoning as well as in swine fever.

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453. Now, you said that the lung lesions of swine fever were always associated with bowel lesions; do you think that is so?—I think so; I have usually found it so.

454. Are rouget and swine erysipelas the same disease?—I have never seen what I could say was a distinct case of rouget, and therefore I am dependent for information from others, second-hand information, with regard to it.

455. I have seen what I believe to be swine erysipelas, but only a few cases of it. What external symptoms would you depend upon to diagnose the disease?—The external symptoms would be comparatively few. In the first place, of the symptoms that would be observed, one of the most prominent is the peculiar husky cough, which is very similar to the cough where parasites exist in the bronchial tubes in calves and lambs. Then diarrhœa and the general depressed appearance of the pig, and probably temperature, would be some guide.

456. External symptoms, I say?—The symptoms of the skin are insufficient. You cannot diagnose from those at all.

457. They are very unsatisfactory?—Very unsatisfactory indeed.

458. Is it not possible that many pigs suffer from swine fever which never have the cough, and whose lungs are not affected at all?—I have seen very few cases of that kind, very few indeed.

459. (*Mr. Wardlaw Ramsay.*) In one part of the country that I am aware of it is said, rightly or wrongly, it is a county which pays no attention to swine fever, I believe, but that I am not certain of, but anyhow it is stated that when an outbreak of swine fever occurs the diseased animal is slaughtered, notice is given to a dealer, who comes and buys up the whole herd, sorts them out, and separates the fat ones from those that are not fat, ready for market; sends the fat ones to the fat market and sells the others in the store market. Of course, with reference to the stores, if they have got swine fever it is found out sooner or later, but you have no sort of protection in reference to the fat animals. Would you recommend that there should be an inspection of slaughtered animals at the slaughter-houses, in the same way that there is for pleuro-pneumonia?—In all places where there are public abattoirs, and in private slaughter-houses, inspection should be carried out, but with regard to the private slaughter-houses it would be a very difficult matter indeed to carry out inspection.

460. Is the inspection carried out?—It is not carried out in private slaughter-houses.

461. Is it in the public ones?—It is in the public ones.

462. As carefully as it is in the case of pleuro-pneumonia, do you think?—I think so. So far as my knowledge goes of the public abattoirs, take, for instance, Manchester, Liverpool, Edinburgh, and some other places (Birmingham, for instance), the inspection of the carcases of pigs there is quite as carefully carried out as of other animals.

463. Then would you think a system of licensing of piggeries would be advantageous?—The difficulty would be, with regard to the licensing of places to keep pigs, that we have a difficulty in getting a record of where pigs are kept. In some of those mining districts our statistics with regard to the number of pigs in the country only include those pigs owned by occupiers of land.

464. But they are perfectly well known to the sanitary inspectors?—They may be in some districts; but in some of the mining districts the sanitary inspector pays very few visits.

465. Do you think it would be advantageous if the

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difficulties could be overcome ?—I think the difficulties could be overcome, certainly.

466. Do you think the improvement could be introduced without hardship, or do you think it would necessitate reconstruction or abolition ?—I think it would absolutely require the reconstruction of all the piggeries, because an inspector could never pass, as fit for occupation by pigs, all places that I have seen. In some of the Welsh mining districts you will find an old barrel laid down on its side, a little bit of railing put down a few square yards in front of it, and that is all the pigstye there is.

467. I want now to ask you whether there are any other animals known to be susceptible to the same form of typhoid, or whatever it is ?—I am not aware of any that take the disease. It has been stated that other animals have been inoculated, and the disease produced, but I have never seen the characteristic lesions produced.

468. The reason I ask the question is, that in the neighbourhood of Edinburgh the question of underground drains has already been alluded to ; it is asserted that the disease is communicated by rats ?—I have no doubt whatever that the rats, in visiting the pig troughs where the disease exists, would carry the contagion on their feet, or carry it with them, the same as any other animal.

469. One question as to compensation ; I think you have stated that you think compensation is most desirable ; but, in this same county of Midlothian, a great deal has been done in the way of the burning of woodwork and the excavation of the flooring to the depth of eight or ten inches, in some cases at a very great expense to the owners. Would you recommend that assistance should be given, because that is a great grievance ?—That is a matter that would have to be considered with very great care, because, wherever a man had a very bad pigsty and you began rebuilding, everybody would get swine fever in order to get a fresh pigsty erected.

470. (*Sir William Kaye.*) Does the flesh of a pig attacked by this disease at once become unfit for human food ?—I do not know that it becomes unfit for human food. I daresay we should not like to eat it, but, at the same time, I do not know of any case in which it has been injurious. Where I have seen pigs dressed while they were suffering from the disease the skin becomes so discoloured that they are really unmarketable unless the skin is taken off.

471. (*Chairman.*) Have you ever considered, in regard to the question of the cleanliness of these piggeries, whether it would be possible to arm the county councils with larger powers, to intervene through an officer of their own over the heads of the smaller authorities ?—There might be a power given with advantage for inspection and disinfection of piggeries generally, but the great difficulty with regard to all pigsties is that the places are so small, even the best arranged pigsties, although the walls may be good brickwork and the floor fairly good ; that there is no room for a man to go inside and work, and cleanse, and disinfect. There is no light either in them, which is the great difficulty in regard to the cleansing and disinfection. Where old wooden pigsties exist, of course, the only thing to do there is to destroy the woodwork, which may be saturated with the products of disease.

472. I suppose most of those pigsties that you described are in places where the space is so confined that it is impossible to build a larger piggery, and where, in fact, a piggery ought not to exist according to the ordinary rules relating to human health ?—You get fairly well-built pigsties either in connection with good farm buildings or in connection with institutions, such as asylums and workhouse schools, where large numbers of pigs are kept, but where pigs are kept in small numbers, in twos and threes, the pigsty accommodation is very bad indeed.

473. Would it not be possible to give the county council a power to draw up bye-laws in regard to such matters, which they would have power to enforce in any district, urban or rural, outside the county boroughs, where this condition of things was found to exist ?—Then the difficulty of want of uniformity of action would again arise. In one district the regulations would be enforced very strictly with regard to the condition of pigsties, and in the adjoining one it would perhaps be very laxly administered.

474. Would not the suggestion I have made be a step in the direction of uniformity ?—It would be a step, certainly, in the right direction.

475. At the present moment you suffer from want of uniformity, because you have to deal with each small authority ?—Yes.

476. My suggestion is that the county council, which is the larger authority, should be able to intervene ?—The local authorities at the present time are really the county councils ; they may delegate certain powers to local committees, but it is really the county councils who are the local authorities under the Act.

477. Quite so ; but then they have not got the power that I wish to suggest they should have ; they can intervene when disease has once commenced ?—Quite so ; but during health they have no power.

478. I put it, whether you would not give the county councils some special powers in regard to creating a state of things which would not be so favourable to the propagation of disease after it is brought about ?—It is a question whether that would not come more under the head of sanitary local authorities.

479. You are aware that the Local Government Act of 1888 already does give to county councils some special powers over the heads of local authorities ?—Yes.

480. The English Act is permissive ; the Scotch Act, which you no doubt know quite as well, is compulsory ?—Yes, I know it is so.

481. You do not see any objection to such a step ?—No, I would see no objection whatever to it, and I think it would be a step in the right direction. Although uniformity of action might not be obtained at once, it would be a stepping-stone towards a better state of things than exists at present.

[The Witness withdrew.

[Adjourned to To-morrow, at a quarter to Eleven.]

SECOND DAY.

Friday, 3rd March 1893.

At 7, Whitehall Place, S.W.

PRESENT:

THE LORD EDMOND FITZ-MAURICE, IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. ALEXANDER SHAW.
Mr. JOSEPH SMITH, jun.
Mr. T. CARRINGTON SMITH.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary.*

Mr. SANDERS SPENCER, called in; and Examined.

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482. (*Chairman.*) You live in Huntingdonshire?—Yes.

483. And you are extensively engaged there as a breeder of pigs, are you not?—Yes.

484. In that occupation you have given naturally a great deal of attention to the whole question of the diseases of swine?—Yes, I have given some considerable attention to them.

485. Before we go any further, perhaps you will kindly give us a little idea of the nature and extent of your business as being a representative man in this matter? It is very important naturally that we should have on the evidence a proof that we are examining witnesses who have a large practical acquaintance with the question?—I have paid particular attention to the breeding of pure-bred pigs for some thirty years.

486. That naturally has brought you into contact with all the different branches of that business?—Yes. During that time I have had a very large foreign trade, so that I have come in contact with buyers and parties interested, from pretty well all parts of the world, perhaps more in the provision trade—in the bacon trade, and the curing trade; with those interested in the improvement of pigs for bacon-curing purposes. In connection with that, I have also had representatives from different foreign countries, including Russia, who have been to me for information as to the breeding of pigs, and, of course, I have taken every opportunity of learning something from them at the same time that I gave them information.

487. In the first place, with respect to the foreign trade, have you formed any clear opinion with regard to the influence of foreign importations on this disease?—At the present time I think they have no influence at all as far as I can see, because we receive no live pigs, comparatively speaking, from abroad.

488. Taking the question historically, do you consider that formerly swine fever came into this country from abroad?—Undoubtedly it is an imported disease.

489. You have no doubt it is an imported disease?—I have not the slightest doubt in my own mind as to that; at all events, I have not the slightest doubt that for years we imported swine fever, or something very similar—hog cholera, or something which goes by the same name: at least the symptoms are very similar, and the effects are the same. We have imported it from America, and from Germany and France; there is no doubt about that in my own mind.

490. What foreign countries do you consider are the principal homes of this disease now?—The States undoubtedly is where at the present time there is more hog cholera, if we may consider that the same disease as our swine fever. There appears to be some doubt about it amongst the scientific persons, but that is a question into which I am not quite able to go. In the States you have two equally celebrated men taking opposite views on the question.

491. Will you tell us a little more about the views of those men?—I do not know that I am able.

492. You mentioned two great authorities in America?—Yes; Salmon is one, and Billings the other. I think one is connected with the Government, and the other is not. I think that is about it—one is the "in," and the other is the "out."

493. Have you ever heard it stated that the eastern part of Europe is a very considerable home of swine fever—the eastern part of Hungary, Transylvania, and Roumania; and that the greater facilities for the movement of cattle westward, owing to the development of railways in that part of Europe, have had an effect on all these diseases, including swine fever?—I cannot say that I believe it has affected it. I believe that on the Continent it has been very common for a great number of years, and I do not think it is at all more common now than it was then, as far as I can learn. In Germany—I do not know, I have not seen the statistics—but some forty or fifty years since the Germans tell me the country was full of it.

494. I suppose greater precautions are taken in those countries against one another to a certain extent now; is that not the case?—Not so extensively as there might be and ought to be, I think.

495. I meant more so than formerly?—More so than formerly. You see it is so difficult for them. Here we are, an island entirely separated from any other country, so that we could take precautions, but between Germany and the other countries I scarcely see how it is possible to keep the disease distinct.

496. You are aware that there has been for a great number of years a sort of struggle in all these countries against one another—Hungary, for example, keeping out Roumanian animals, Germany keeping out Hungarian animals, and so on?—Yes, in Hungary

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it was very common there. Some 15 or 20 years ago —I can hardly tell, time passes so quickly—I had over from close to Vienna, Budapesth, some gentlemen very much interested in the question, and they said that in Austro-Hungary, there were great numbers of outbreaks, that it was a most common disease among them, and at that time they thought but little of it, and took no precautions comparatively speaking against it.

497. You are no doubt aware that during the last twenty years the whole railway system of that part of Europe has been completely revolutionised?—Entirely.

498. Formerly in those countries there was hardly any railway communication with the West, and now it is quite easy—pigs move in thousands, and so do animals of all kinds?—I am not sure that that has had an effect on the increase of the outbreaks of swine fever. In Norway they have no swine fever, and in Denmark and Sweden they have had very little swine fever. In Denmark and Sweden there has been quite as great a traffic in pigs as in other countries on the Continent. In Denmark they have made a particular study of swine fever. Then again in Holland there is a very large trade done in pigs, and as far as I know the outbreaks of swine fever are not greater now than they were before. I think one of the reasons why it appears that the disease is so much more prevalent on the Continent now than it formerly was, is that it has been spoken of in the newspapers as much more prevalent, and the question is ventilated so much more. Even in England thirty years since we thought nothing of swine fever; we used not to hear much of it; we used to hear of red soldier, purples, &c. Just the same with pleuro-pneumonia since I remember. If animals were attacked with pleuro-pneumonia we used, when I lived in Norfolk, to send them on to Norwich by road, and they used to come to London time after time and meet the store cattle coming down. I have sent many a one myself. I used to fat 200 or 300 Irish cattle a year, and we were almost bound to have it.

499. Have you ever heard that Servia is considered the home of swine fever?—I may have heard it, but I do not know that I paid much attention to it.

500. It has not come within your notice that there is an enormous trade in swine, which is constantly prohibited on the grounds of swine fever between Hungary and Servia, and that it has been often stated that the free import of the diseased animals into Hungary has disseminated swine fever?—I should not be at all surprised. You see Servia is a semi-barbarous state, where there are enormous quantities of pigs, and the pigs get their living themselves by wandering in the woods. You can easily understand that the disease would be disseminated and become general all over the country.

501. Yes; but I am rather asking you the question from the point of view of dissemination over Europe, and so its affecting the trade with England?—I should think it would be very difficult indeed to say from whence the disease is disseminated. It is in nearly every country at the present time, and from whatever place the movement of pigs takes place where the disease exists there you get the disease disseminated from that point. I do not think you would be able to localise it as far as I can see.

502. The only object of my question was to bring out the additional dangers which have arisen in connection with this class of animals, from the greater facilities of communication with the East of Europe?—No doubt the greater the communication, and the more the pigs are moved from one district to another, the greater would be the fear or risk of the disease.

503. Is it not the case (perhaps I ought to ask it of some other witness more properly, still you have heard a great deal about these things) that a few years ago, I think about 1885, there was a prohibition against Holland, that Holland had prohibited German import, Germany had prohibited Austrian import, Austro-Hungary had probited Roumanian and Servian import, and consequently that the disease remained in Roumania and Servia?—I believe they did, and at the present time Denmark prohibits swine from England. I was over at Amsterdam, I think it was in 1885, and was talking with some of the members there, and at that time they were very keen on the point of swine fever. I was with Mr. Baudin. He was one of the guarantors for the International Exhibition, and I spoke to several persons connected with the Government. I believe there was an outbreak of swine fever actually in the yard at the time at the Amsterdam Show. I had some pigs there, and sold them as quickly as I could to go into Germany as soon as I heard that there was an outbreak of some disease. I was in the yard, and I was in treaty with an Englishman—Schutt and Ahrens were the agents of the man—who had been asking about these pigs. I sold them to him, and they went to Hamburg. However, no disease followed them. It was said at the time there was an outbreak of disease in the yard, and one or two animals died. It might have been swine fever, and it might have been simply cold, as it was a fearfully wet time, and part of the time the pigs were lying in the wet.

504. Would you tell us your views in a little greater detail on the character of the disease. I see from a paper which I hold in my hand, of which you are the author, that you have given a good deal of attention to this branch of the question, I mean with regard to the character of the disease as compared with the diseases which are known by the same or similar names in foreign countries. I think you enter into this matter in the paper?—I have written so much and said so much that I do not know what I have said and written.

505. It is on page 5 of the pamphlet?—I think the symptoms are very much the same, as far as I remember, in rothlauf, hog cholera, swine fever, and also erysipelas, or almost any disease to which a pig is subject. The first symptom of disease in a pig is the refusal of food, and generally speaking the next symptom is that a rash or redness of skin shows itself—the circulation is bad, I suppose. With almost every pig ailment you get a discolouration of the skin. Only three months since a young sow suckling some pigs simply went from one pen to another, and was a little trouble in driving. I happened to be looking over the door at the time with my pig man—and the sow simply turned over on her side as though she were in a fit. I thought she had died. I pulled my knife out, bled her in the mouth and got some blood from her, and she recovered, but within a month afterwards she died. About a week after she was first taken she had another attack. She refused food, the skin became almost purple all over her, except under the arms and under the shoulders, and the udder—these were perfectly white. I said to the veterinary surgeon, "I have a young "sow that is queer." He said, "What is the matter "with it, sir?" I said "It is for you to tell me." He said, "No, I think you know more about it than "I do." I said I thought heart disease. He said, "What are the symptoms?" I told him. He said, "That is what it is no doubt." Within three weeks I had her knocked on the head and opened her. Her heart was diseased—that is what it was. A few years since if a veterinary surgeon had come and looked at her he would have declared it was swine fever.

506. Is that the only case you have had?—No. I can produce within a fortnight on a pig, symptoms which in years gone by the veterinary surgeons—they now are not quite so careless about the matter—would have declared to be swine fever, and they would have declared the place to be infected.

507. I mean have you had the disease to any extent in your own place?—I never had it.

508. Now to what do you attribute your immunity. I should like to ask you a few questions in regard to the reasons?—I think that can be very easily answered. I never go to market. I never buy any pigs. I perhaps buy one or two pigs a year—not more than that, and then I have them from persons who have been breeding from my stock, and I know that they are perfectly sound, and to avoid any risk when I buy one I send it to an off place and keep it there for three or four weeks, until there is not the slightest chance of any disease. I think, as briefly as possible, that is the sole reason why my pigs have kept for thirty years free from swine fever. As to the question of cleanliness or non-cleanliness, I believe, it has not the slightest thing to do with it. Of course I attempt to keep mine as clean and as well managed as possible.

509. The conclusion no doubt you draw from that is that the principal cause of the disease is carelessness in movement?—I should give it rather a harsher term than that. Carelessness in movement would not produce it, but the movement of in-contact pigs is the whole and sole cause.

510. That is what I refer to?—I think it is something worse than carelessness. I have had a great many foreigners at the place. Some few years since almost one of the first questions I used to be asked was how I kept free from swine fever; the foreigners seemed to imagine that when you have a quantity of pigs together it was impossible to avoid it. They come and see 400 or 500 pigs and they say: "What do you do when you have "swine fever?" I have been asked it scores of times. I say, "I never have it." They say, "In "our country we are always having it." I remember a lot of Germans some years since saying that. Hungarians asked the same question. They said, "What do you do when you have swine fever?" I said, "We never have it," but in Vienna, they said, at the Vienna market at that time there used to be any quantity of it. It is the same in Russia; they have a good deal of it in Russia, and Poland too. I remember a Pole coming over. I had from the Russian Government a Mr. Neystchtoube from St. Petersburg—I forget which department he was in now, he was sent over just at the time when the Russian Government were taking steps to encourage the manufacture of bacon at Karkoff. There was a Mr. Crukoff came over, and as I say Professor Kouleschoff, from the Moscow College, was over too—he was the second in command at the Agricultural College at Moscow. I had also a gentleman, Mr. Vueschagin, from a dairy school on the Volga. General Annenkoff's agent was over too. Nearly all came over at the same time. I do not know how many years since. It was six or eight years since, when the Russian Government was taking up this question. They took it up rather strongly. I forget how much money they advanced for the purpose of encouraging this trade in the bacon curing. I know some of the bacon was sent over here to Thompson, Corderoy & Co., as it was then—Thompson & Co. it is now. It has been a matter of surprise to all the visitors that my pigs should keep free from swine fever.

511. Have you ever noticed generally any difference between the pedigree animals and others in regard to freedom of disease. We have had a statement made to us in regard to that matter?—I do not see what difference the pedigree should make. The only question is that some persons are not sufficiently careful in the mating of their animals, and you may lower the powers of vitality, so that they become more easily infected. You can weaken the vital energies so that they are more easily affected and take infection much more easily, just the same as with human beings.

512. Almost the converse of that statement has been made to us, that it is rather because of the better keeping and feeding, and the other circumstances of pedigree animals that they are free from it?—It is not my experience and I do not see what difference it should have, except so far as the good management and the good feeding would have an effect on the constitution or the ability to ward off disease. An animal may become weak from two causes: from want of attention and from natural causes, want of constitution. You may so feed an animal that you may weaken its constitution, or you may weaken its powers of resistance. The fact that a pedigree animal has for a number of years been bred with care, of course, would render it constitutionally stronger; but then unfortunately the system of pedigrees has been so ridden with a good many that the really pure bred, these highly bred animals are more subject to disease in my own opinion than the common stock.

513. I would now like to ask you a few questions in regard to the position in your county: what has been the policy pursued by the Contagious Diseases Committee of your county?—Some ten or twelve years since our county had a most unenviable notoriety; I believe it was one of the sinks of England as far as swine fever was concerned—I cannot tell how many years since. I found it seriously affected my trade.

514. What steps did they take to try to cope with it from time to time?—I took the steps. I went to the chairman of the magistrates, Mr. Philip Tilliard, and spoke to him; he was a member of the firm with which I banked, and I complained of the neglect of the county authorities.

515. What was the date of that?—I cannot tell you.

516. (*Sir Jacob Wilson.*) Was that prior to the County Council?—Yes; it must be some 12 years since, Mr. Tilliard has been dead some seven or eight years. I saw him at Huntingdon at the meeting of the magistrates; he said "we have not time to talk about "it now." He said "do you mind my coming over "and having a day with you." I said "we will be "very pleased to see you and you can see the pigs." So he came over and had a look at the pigs. We chatted. He said to me "about this swine fever "question, what do you propose?" I said this: that the next outbreak "you should trace it, un- "doubtedly summons the dealer." I had a pretty good idea whence most of the outbreaks emanated, or of the dealers who were the cause of it. He said "why "do you say that?" I said "I think I can tell you "where you will trace the first outbreak to, "you will trace it to either one of these two or "three persons." I mentioned the names. He said "why do you think so?" I said "I have been "taking note for some time." He said "what steps "would you take?" I said "summons him." He said "suppose you do not get a conviction?" I said "it will not matter whether you get a conviction or "not; the effect will be the same; I will arrange "that it shall cost him something to defend his case." "Can it be done?" I said "yes; you have the out- "break; you set the police to work to trace it; you "will find that you will trace it to St. Ives market; "you will go from there most likely to Bury or to "Bedford, or it may be from St. Neots to Bedford." The man happened to be caught. He brought some pigs from Bury St. Edmunds to St. Ives and one actually died. I think this was the first case, I will not be certain. However, this was a case which happened at the time. One actually died in the truck, and the pigs were distributed. Of course, swine fever followed. The man was summoned. I let the man know that it would be to his advantage to employ counsel; if not he would be certain to be convicted, and if he were convicted that the fine would be very heavy, because they determined to make it a test case and put a stop to it. He employed counsel, and when the case came before the magistrates, it was tried at St. Neots, I

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believe, the bench of magistrates came to the conclusion that the evidence was not quite sufficient to convict him, but his bill of costs, that is his expenses, amounted to something like 15*l.* in defending his case. He did not bring another case of swine fever into the place.

517. (*Chairman.*) He was made to bear his own costs?—Yes. I do not think they wanted to convict him entirely. I do not think it was necessary. I told Mr. Tilliard, "I do not think it necessary to "have a conviction if you run him to expense in "defending." He said, "Supposing the man is not "guilty?" I said, "I am certain he is; he has "been for many and many a time, and the results "will show whether I am correct or not." There was another firm of dealers also guilty, and since that time we have had very few cases of swine fever in the county, so much so that the St. Ives division was clear for twelve months. From December 1891 to 1892 I think we had not a single case in the St. Ives division, and years ago we were never without it.

518. You have told us very fully in regard to these past prosecutions, and it is very important and interesting, but what I rather want to bring out is what I asked, I think, a few moments ago: What are the regulations which now exist; what is your county doing at this moment?—The county at the present time is declaring the farm an infected place, allowing the animals to remain in the diseased state until the poor brutes die, or the owner does what he likes with them, paying no compensation.

519. Paying no compensation?—That is so.

520. Now we should like to know what you think on the question of compulsory slaughter and compensation? You no doubt recollect the time during which the Compulsory Slaughter Order was in force?—Yes.

521. Now what is the result of your experience?—I think the result would be very different at the present time to what it was when it was tried some years ago, for this reason: I think the veterinary profession know a little more of the disease than they did then. I am afraid a good many of the veterinary inspectors are not thoroughly acquainted with it now, or at all events that they do not take sufficient care in making thorough examinations to be able to give a report of any value.

522. Then do you wish the Committee to understand that you think the comparative failure previously of compulsory slaughter was owing to want of knowledge on the part of the veterinary profession?—I think it was partially due to that, but more particularly to the want of the tracing out of the various cases of outbreaks, and the punishment of those who had distributed the disease—who had removed the animals. I think in nearly every outbreak of swine fever, if proper care were taken, it would be possible to discover whence the disease originated, and it would also be proved that someone had removed animals which were either diseased or had been in contact with diseased animals.

523. At the same time, the very case that you quoted just now shows the difficulty of proving that it is due to neglect?—The result proved that the steps taken were correct, because it not only cleared our division to a great extent of disease, instead of being as it was a few years since when we were never free from it. Wherever pigs went from St. Ives' market they almost always carried swine fever with them.

524. Do you recollect enough of the details of that case which you quoted just now to give us evidence in regard to it, because a concrete case of that kind is very interesting?—You would easily obtain from the clerk of the county magistrates a full report of the case. I believe it was tried at St. Neots. I could, perhaps, from Mr. Maule, the Clerk of the County Council, get the full details of the case, I should think.

525. In your county are there any independent jurisdictions within the county?—There are the boroughs, but I think they all work together now. Some few years since I know the borough of St. Ives made some little trouble, and the county soon brought them to their senses by simply closing the county against the borough. I believe that was a case of foot and mouth disease. I do not know which outbreak, of foot and mouth or swine fever, but one or the other. The borough authorities would not make the regulations which the county authorities thought desirable, so the county authorities simply closed the county against the borough, and they soon brought the borough authorities to their senses.

526. Was that borough one of those which was merged by the Act of 1888 for contagious diseases purposes?—It was long before then. It would, I think, be in the time of the foot and mouth disease. I cannot remember exactly when it was, but some years since. I remember distinctly, although I lived close to St. Ives, that I could not get animals through St. Ives to my farm, although St. Ives was my station, and I used to send them to another station the other way, so as not to go into the borough of St. Ives.

527. Are there not a great number of separate small jurisdictions in your part of England which give trouble. I mean, is it not the case that the county of Huntingdon, the Soke of Peterborough, and one or two boroughs are close to one another?—The only one I can remember at the present time is the borough of Bedford.

528. Is not the Soke of Peterborough near the county of Huntingdon?—It touches it. Part of Peterborough is in the county.

529. I think you can take it from me that the Soke of Peterborough is a separate administration?—Yes; I know it is, but I do not think at the present time there is any trouble with it.

530. That is not the question. I am asking you as an expert in these matters, not as to whether there is any actual trouble at this moment; but as to whether these independent jurisdictions are not a source of difficulty?—I do not see why they should be, because the difficulty could be easily overcome, as it was in the case of the borough of St. Ives. If Rutland, Norfolk, Northamptonshire, Nottinghamshire, and the Isle of Ely were too close——

531. (*Sir Jacob Wilson.*) "If?"—Well, of course, there is no doubt they are perfectly independent.

532. (*Chairman.*) Is there not a very large market at Peterborough?—I do not often attend Peterborough Market.

533. Your large knowledge, as a breeder of pigs, would enable you to answer that question, whether it is, or is not?—I could not answer of my own knowledge.

534. Surely the evidence which you have already given us points to the fact that it is the difference between the regulations of different local authorities which is the cause of this trouble to a great extent, and therefore, in exact proportion as the number of authorities is multiplied so will the difficulties increase?—Undoubtedly; that is one of my strongest arguments in favour of having a central authority.

535. I wanted to lead up to that gradually; but I wanted first of all to ask you as to whether the natural result of the state of things that you describe is not that the officials of one county would be mainly employed in encountering cases of disease introduced from neighbouring independent jurisdictions?—No doubt it has been the case, because there are different interests at stake.

536. And it might be the case at any moment now?—It might be, no doubt, except that we are getting more educated on the matter. I think the country is; and even the parties interested in these local markets see that it is to their disadvantage that any disease should go from that market, because it

not only seriously affects the standard of the market, but affects the price of the animals sold there.

537. You are aware, I dare say, that there has been a considerable apparent decrease of this disease on the returns of the year 1892 ; now do you consider that that decrease is a real one or an apparent one ?—It is due to causes, I think, very easily explained.

538. Will you tell us what you think the causes are ?—The railway rates question has affected that. There is not the slightest doubt about it.

539. Assuming that that is one cause that is acting as a check upon movement, do you consider that the cessation of the payment of compensation may not have caused possibly an apparent diminution by the fact that people will not take the trouble to give the information as to the existence of disease, and that, therefore, existing cases do not get entered on the returns ?—I have not the slightest doubt about it. I think that human nature is such that the majority of persons, if they thought they could escape detection, would take what they thought the best means of getting rid of their cases of swine fever, or of the animals that have been affected by it. It is not so much in the movement of pigs alone where the railway rates have affected the question, as it is in the movement of small lots of pigs in crates from certain districts. There is a greater movement in pigs at the present time than we have had for the last two or three years, on account of the increased value and greater demand ; but from the 1st January, or rather after the first week in January, for some three weeks the trade in small pigs in crates, by luggage train from certain districts, was entirely stopped.

540. (*Sir Jacob Wilson.*) May I ask whether this refers, not to a single pig in a crate only, but to numerous pigs ?—To numbers.

541. I want to get an idea of how many pigs there are usually carried in a crate ?—It depends on the size of the pigs and the size of the crates.

542. Of course, I am aware of that ?—Perhaps I spoke rather abruptly.

543. You can only have a certain-sized crate in a certain-sized truck ?—It is this : the railway regulations are that the minimum weight of a consignment of pigs in crates shall be 2½ cwt., and if you get a dozen pigs weighing 10 lbs. say, you could put them in one crate ; but if you get pigs weighing 20 lbs., you can only put in, say, half a-dozen. It has an effect this way : the majority of the trade to which I am referring has been in little miserable pigs, low-priced pigs, bought at markets, which have been sent to markets from farms, or places, or dealers' yards, where swine fever has existed ; sent there to be got rid of and sold at a very low price, which enabled these persons to buy them. These people take the crates with them, and away the pigs go to their destination, and swine fever almost as certainly fellows them. We have had one or two, I think, in our own county. These were some sent from Bedfordshire to Huntingdonshire ; they were put into crates and sent into Staffordshire. I think they had 20 outbreaks from them. They simply crossed the border. I think that I am right.

544. (*Mr. Carrington Smith.*) Quite right ; we were obliged to stop you from sending them ?—And we stopped Bedford from sending them and we had no case then for more than a year ; we stopped Huntingdonshire against Bedfordshire ; Huntingdonshire was simply made use of by these persons ; they would send their pigs there because at that time pigs could be received in other counties from Huntingdonshire and could not from Bedfordshire. We in Huntingdonshire accepted them from Bedfordshire ; and so they came from a market in Huntingdonshire, and that then gave them power to go into other counties the same as they went into Staffordshire. I believe that at that time pigs were excluded from Bedfordshire but not from Huntingdonshire, so that pigs were brought over the border, sold at St. Neots ; then you see they came from Huntingdonshire and not from Bedfordshire.

545. (*Chairman.*) Does not that again point to trouble arising from different jurisdictions ?—It is a very strong argument.

546. Are you aware that when the Boundary Commission of 1887 held an inquiry into that part of England these conditions with regard to cattle disease were stated to the Assistant-Commissioner as one of the principal reasons for an alteration in the administrative areas there, which has never been made ?—I am not aware of that.

547. You are not aware of that ?—I daresay I read it.

548. You may have heard of it ?—I have no doubt I have heard of it, because I have taken considerable interest in the question all the way through.

549. You are not aware that it was proposed by the Commissioners that the Soke of Peterborough, which is an administrative county now, should be transferred wholesale to the county of Huntingdon, and that one of the reasons for that recommendation was the question of the administration of these Acts ?—I cannot say that I remember its being so, but if my opinion were asked on the question, I should say that that would be one of the best steps to take towards getting rid of any contagious disease in England, and a step that really is not only desirable but almost necessary. No doubt the various jurisdictions have made it very difficult to carry out the Acts.

550. I suppose there is hardly any part of England where so many small jurisdictions run up against one another as there. Have you not got a point where Lincoln, Rutland, the Soke of Peterborough—— ?—And Northamptonshire.

551. Yes ; are all within a few miles of one another ?—And Norfolk and the Isle of Ely.

552. Then, as you describe, the pigs are dodged about as it were ?—Yes.

553. In order to come out of a county against which at the moment there is no proclamation ?—I have no doubt that was the object, and the only object, as far as I can learn, because when I heard of this outbreak—I heard of it from the clerk of the County Council, when they had a complaint from Staffordshire about this—I took the trouble, as I have done in many cases, to try and trace it out, and I found that the pigs simply came over the border, were sold in St. Neots market, put into crates and sent from there into Staffordshire. I have traced out a good many of the cases of swine fever, and I think of late years in our division we have scarcely had a single outbreak that we were unable to trace it to its source and prove that it emanated from some place or other out of the county where swine fever was, and where the animals which were diseased at the time, which were infected, that is, in-contact pigs, had been removed from. We had one case from the Isle of Ely. A man had lost 25 or 26 —they had been gradually dying ; he sent some to St. Ives or Huntingdon, I forget which, but he sent them to other different markets, and swine fever followed in every case.

554. I understood you to state just now, incidentally, and I will put the question now in its proper order, that you were in favour of this disease of swine fever being dealt with from headquarters ?—Certainly.

555. Would you describe to the Committee in what way you would propose that the Board of Agriculture should act, whether in exactly the same way as is now done with other diseases of animals, and if not, with what variations which the different diseases concerned make necessary, especially in regard to joint action where necessary, between the Board of Agriculture and local authorities ?—The only question that appears to me to arise is as to whether or not the majority of the local veterinary inspectors are competent to give a decision as to whether or not it really

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is a case of swine fever. That is the only thing I should be inclined to suggest any variation in, the attempt to determine whether or not an outbreak really is swine fever.

556. Is not the difficulty this: that swine fever is a disease frequently so widely spread that it would be almost impossible for the Board of Agriculture to rely entirely upon the staff from London?—I think not. I think within three months' time if it were generally known that each outbreak was to be traced to its source, and that everyone who moved pigs which were affected or had been in contact was to be made responsible, you would find that alone would influence the number of outbreaks very considerably. At the present time there is no doubt that it is a system with many of those persons who have diseased pigs to dispose of them, and it has been for years. That has been put a stop to to a great extent during the last two years, and I think that is the effect of the steps that were taken some two years since when I went to see Mr. Chaplin. The question was then brought before the Central Chamber of Agriculture, but for some reason or other they declined to take up the matter. They thought that the local authorities had sufficient powers at that time, and as Mr. Biddell said, the moment you begin to compensate, you begin to have cases of swine fever; and the moment you cease giving compensation, swine fever dies out. That was as far as I can see the strongest argument in favour of their taking no steps. Then within six months afterwards they actually formed a deputation and went to the Board of Agriculture and took a precisely opposite line to that which they had taken a few months before. In my opinion that is the sole reason that we have swine fever now. If the Central Chamber had taken up the question two years since and supported Mr. Chaplin we should by this time have got rid of swine fever; providing the veterinary authorities had been able to give sufficient attention to it. You see we had that outbreak of foot-and-mouth disease in Kent and that gave them some employment.

557. Do you consider that if the Board of Agriculture took over the duty of dealing with swine fever it could practically act in the same way as it does in regard to other diseases?—I am confident of it. It would have a deterrent effect, and it would have a remedial effect, because you would at once remove or get rid of the centres of infection which are now allowed to exist for week after week in various parts of the country, and you would at once put a stop to the movement of pigs which are affected or have been housed with or in contact with, animals affected with swine fever.

558. You would I understand combine a policy of repression of movement with one of compulsory slaughter and compensation?—To a limited extent. I think the two diseases of swine fever and pleuro-pneumonia differ so greatly that the question of an infected area would arise, and as far as I can see there would be a very slight necessity for a large infected area for several reasons. In the first place you see swine fever is bound to show itself within ten days—perhaps between five and seven days—certainly within a fortnight, whereas pleuro-pneumonia may remain in the system for months and months. Then again, the conditions in which cattle and pigs are kept are so entirely different. The majority of pigs are kept in an enclosed area not of greater size than this room, whereas cattle roam all over the fields and so come in contact with one another. In the case of the pigs except by means of the contagion being carried by cats, rats, or something of that kind and by the persons who attend the animals, whilst they are allowed to live, as they are at the present time, there is very little risk of the contagion. The contagion may be carried by birds; there is no doubt of that.

559. Do you recommend compulsory slaughter and compensation in such cases as those even if you can limit it more easily?—Most decidedly, because the moment that you exercise your powers of compulsory slaughter you do away with the centre of infection, you do away with all risk of the infection being carried by means of birds or rats, or persons, or by other means.

560. Therefore you recommend three things: restriction of movement, compulsory slaughter, and compensation?—Limited restriction of movement; perhaps I am tiring you.

561. No, we wish to hear your evidence fully?—Why I say a limited restriction of movement is this: I think that there is not the necessity for declaring a large area, circle, or place as an infected area, circle, or place, for the simple reason that a case of swine fever may occur as it has done in our own hamlet within 400 yards of my place, where my pigs are, and not be extended except to an adjoining piggery. Both the piggeries were infested with rats. Go when you would, as I have often gone, you would see their marks. The owner was an old man who used to work on my farm and now he keeps two or three cows and some pigs. I have often said "You are stupid to keep your pigs in such a beastly state; you are smothered with rats." He went to market, bought two pigs which had swine fever at that time; and his place was declared infected. The rats ran to the garden of another of my men. I said to that man "Your pigs are bound to have swine fever; you had "better have them killed; they are sure to have it." He said "we do not visit each other's places." I said "the rats do." Within ten days his pigs were down with swine fever and died. My place was about 300 or 400 yards off. I make a particular point of keeping down the rats. I used to keep pigeons. Some seven or eight years since, just over the river in Cambridgeshire, there were a great many outbreaks of swine fever. Some people did not keep their pigeons quite so well as they should do, and the pigeons went and fed with their neighbours. I found that in the morning my buildings would be lined by perhaps 100 or 200 pigeons waiting for the man to go and feed the pigs—we feed them on the pasture—and that then the pigeons flocked down to the pigs. I said "Where do these pigeons come from." He said "Some come from Drayton, some from Swavesey and some from St. Ives." I found it was not a very profitable thing. I said "Swavesey! They have got swine fever there." He said "Lots of pigs have it there." I said "I will kill the pigeons." He said "Shall I shoot them, they are not all ours?" "They are on the premises; I do not know which belong to us and which belong to other people." I said "You can shoot them" and we did. I did it entirely for the purpose of preventing the risk of these pigeons bringing swine fever to my pigs.

562. Now, in regard to the question of compensation, have you any suggestions to make as to the sums which should be paid?—Yes, I think at the present time the amount, 4*l.*, is totally inadequate.

563. What would you recommend?—I should recommend the value of the animal.

564. There is a distinction between the diseased animal and the contact animal?—Yes, at the present time, I think the limit is 2*l.* for an affected animal, and 4*l.* for an in-contact one not diseased.

565. Yes, that is so?—I should certainly raise the value of the in-contact animal, or the animal not affected, to its market value. If it is necessary to have a limit I should have a limit considerably higher than it is at the present time. Only within the last month I was asked to work out some figures as to the estimated value of the pig stock in the country, and the difference in the value, if any, within the last few years. I went carefully into the matter and as far as I could see I made the value of the 2,000,000 odd pigs in the country come to 2*l.* 1*s.*4*d.* per head, in the year 1891. That was at the time of the low value, and I should think at the present

time you would find the average value of the pigs to be about 3*l.*

566. I suppose there would have to be some limitation in regard to the very highest priced animals, or would you have no limitation at all?—I do not think it would be a very serious matter, because if you take the outbreaks of swine fever you will find that the average number of animals, on a place where swine fever breaks out, is only about from four to six. I think in 1892 the average number of pigs on a place where the outbreaks occurred was only 4½, and in 1891 only six. If it could not be done in any other way I should rather prefer to reduce the amount given in compensation for animals that are affected. And this, for two or three reasons: The first reason is that I think the mere fact that their compensation would be reduced by two-thirds for every animal that becomes attacked, would encourage persons to give notice of an outbreak. There is not the slightest doubt in my own mind that ninety-five per cent. at least of the animals that are attacked with swine fever are certain to die, and that two or three per cent. of those which are said to recover are worse than valueless; so that if you do not pay the owner more than, say, one-third the amount of the value of the animals before they were attacked, I think you do him no injustice; whereas if you take the sound animals of a person and kill them for the benefit of the neighbours, the neighbours or the country ought to pay him some compensation.

567. (*Sir Jacob Wilson.*) You would give full market value for in-contact animals and one-third for diseased?—That is it.

568. (*Mr. Carrington Smith.*) It is one-half now?—I say I should be inclined to reduce it. At the present time it is one-half, but then you have two limits. You have a limit of 2*l.* and a limit of 4*l.*; I would make the limit of the value of a sound animal to be its market value, and I would make the limit of the value of the infected animal one-third instead of one-half.

569. (*Chairman.*) I see that you have made a suggestion in the paper, which I hold in my hand, that it might be desirable if information in the first instance was to be given, not to the police, but to the veterinary inspector?—I believe, at the present time, that is the regulation in force in our county, upon my suggestion, I believe. They said they would carry it, but I really do not know whether it was carried.

570. I think you will find that it is statutory to give it in the other way, and I understood that in this paper you made the suggestion, and I want to know why you think it would be desirable?—For this reason: so many people have an objection to go to the police; country people especially object to it. They dislike to go to the policeman. Another thing too, if I had a case amongst my pigs which I thought was a doubtful case, which I thought was swine fever, and could not decide in my own mind as to whether it was or not, I should not like to go to the police, and have the police drive over and bring the veterinary inspector, and all the rest of it. I should much prefer, at least I should do it whether statutory or not, to go to the veterinary surgeon, and I should get an opinion from him before I went to the police. About two months since, perhaps not so long as that, someone from Sussex came to my place, bought some pigs, and sent them home. Soon afterwards, or about that time, he bought some pigs from a dealer at Bedford. About three weeks after the pigs had left my place I was in my office and the servant came, "Please, sir, the Superintendent of "Police wants to see you." I said, "All right, show "him in," she showed him in. He said, "It is rather "an unpleasant duty," and hesitated. I said, "Never "mind, what is it, let us have it at once?" He said, "I have brought over the veterinary inspector "to examine your pigs, or to get information as to an "outbreak of swine fever, which has taken place "amongst your pigs near Hastings." He said, "I "have been to the station and I find you sent "them off on such a date," and so on, "and the "Superintendent of Police at—" I forget the division but it was close to Hastings, "says the veterinary "surgeon gives it as his opinion that the animals "were diseased before they left your place." I said, "You can take the veterinary inspector and go round "and examine every pig on the place; my man will "show you all that I have." I looked at my books, I said, "There are eight pigs of one lot; from "which three went to Hastings, and there are "thirteen left of another lot." I told him which they were. It was all over the village, all over the district within a week, that the inspector had been over to my place, and that my pigs had swine fever.

571. Would it not be very difficult for what we call in Wiltshire "a small man" to communicate in the first instance with a veterinary inspector instead of with the police?—Not at all, no more difficult than it is at present, not the slightest. I see no objection to it myself, but I feel sure that a good many persons do object. A case occurred in our own village where a man said "No, I am not going to a policeman. I am "not going to be mixed up with the police." Perhaps he had had too much acquaintance with the police before.

572. I think you would admit there would be a difference between the case of a very large county and a very small one in a matter of that kind; of course I will admit that a large county would have a greater number of inspectors, but still the distance is greater?—There is one in each district, and at the present time with the post and telegraph I think you would have no trouble. I do not see that there would be any difficulty in that. I simply suggested it, because I know there has been expressed to me a disinclination on the part of some persons to go to the police. Why they should object to it I do not know. Of course it is perfect nonsense, but then I simply know that it is so.

573. The area as a rule is a Petty Sessional Division?—Yes.

574. And some Petty Sessional Divisions perhaps, unfortunately, are very large. Have you ever considered the circumstances of a county quite different from yours?—Yes; but then you see if he had the power to go to either party, if he could not get to the veterinary inspector he could go to the police.

575. You would make it optional, you mean?—Yes, certainly.

576. (*Sir William Kaye.*) What is the system of breeding pigs in England. Are they not in large herds generally?—No.

577. Is it not so?—No, you can easily prove that, if you look at the returns for the last two years. You will find, I think, as I have said before, that the average numbers of pigs on the places where outbreaks of swine fever occur, in one year is four and a half and in the other only six. You may find some few places, not very many, where there are large herds of pigs kept, but the greater part of the pigs are kept in small numbers and on small holdings, and you will find a very much greater proportion of pigs per acre on the small holdings than you will on large holdings, because personal attention is one of the things required in the successful management of pigs, and that it does not get on the large holdings.

578. You referred to an interesting case of a prosecution just now. Was there only one prosecution at that time; was that not followed up in any way?—There was no necessity for it, at least when I say no necessity for it, it acted as a deterrent, and that I say is the great advantage of the question being taken out of the hands of the local authorities and placed in the hands of the central authority, because so many country people imagine that the board of magistrates in their district would be less likely to be severe than would a central authority.

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I will not say less capable, but certainly not so likely to follow up the question.

579. You say you think the maximum under the present order of 4*l.* it too low?—Certainly.

580. If you were asked to fix a maximum, what would you fix it at?—I should somewhat hesitate as to that, because the value of pigs varies so much. Two years since fat pigs were worth perhaps 30*s.* or 32*s.* per cwt., I think, and at the present time they are worth 60*s.* or 65*s.*, while even in the States—a year since—they were worth about four dollars fifty cents., yet at the present time, and a month since they were worth about eight dollars fifty per cental, so you see now they have a value of nearly as much again.

581. Evidently the object of the original Cattle Diseases Act was to fix some limit?—Yes.

582. For instance, in the 15th Section of the Act it is provided that if an animal be slaughtered affected with cattle plague the compensation should be one-half of its value immediately before it became infected, but that the compensation shall not in any case exceed 20*l.*, that is in the case of cattle plague; in every other case the compensation is to be the value of the animal immediately before it was slaughtered, but so that the compensation does not in any case exceed 40*l.*?—At the present time the owners of pigs are treated so very differently to the way in which the owners of cattle are, because you will find very few cattle at the present time for slaughtering purposes would be worth much more than 20*l.*, and yet the limit is 40*l.*, whereas, now you cannot find a fat pig of any size that is not worth considerably more than 4*l.* You see you get a limit in the case of cattle of double the actual value, and in the case of pigs you get less than the actual value.

583. But you see a person might have a valuable pedigree pig which he might put a fancy price upon?—It would not be for him to put the value on it, it would be for the valuer.

584. I know, but the valuer might be satisfied too, that it was worth, perhaps, to this particular individual a very large sum?—Such a case might arise, but fortunately it has not.

585. (*Sir Jacob Wilson.*) Pardon me, it could not arise under the present Act?—No, but, as I maintain, you are doing an act of injustice, not only to the owner of pedigree herds, but to the owners of all pigs. What I had in my mind was not because it could not be done according to the Act, but because in a well-managed herd there would be no swine-fever. You can scarcely point to a herd, except where dealing has taken place in it, where swine fever has broken out.

586. (*Sir William Kaye.*) But supposing that the sum of 4*l.* were doubled, and that the maximum were made 8*l.*, would that give greater satisfaction?—I would not go so high as 8*l.*, if you were to ask me to fix a price. My views of compensation would be these—For a diseased animal, a third of the value of the animal before it was affected, and a limit of, say, 7*l.* for a sound animal.

587. (*Mr. Carrington Smith.*) That would apply to both lots, of course?—That would apply to all lots, but you might have an exceptional case. I believe Mr. Hugh Aylmer's herd at the time of the cattle plague was made an exceptional case. His herd was of historical value, the same as some others might be. He was allowed to treat them with chloroform or something.

588. (*Mr. Wardlaw Ramsay.*) You said you had swine fever within 400 yards of your premises?—Yes.

589. Is it not the case that it is your practice to allow your swine to run at large at certain seasons?—All the year round close to the house.

590. Did that freedom to go about the place bring them nearer than 400 yards to the infected place?—No, because as soon as I heard that this man was buying pigs I kept them from that side of the place. It happened to be in the village. My land lies on *this* side, and the outbreak occurred on the lefthand side, the east side. Where my pigs came out at that time was on the west. I have another place now almost close to where this outbreak occurred, but at that time my pigs were on the west away from that place, so that no pigs went nearer than 400 yards to the place where this disease existed.

591. I think you said that you thought outbreaks often occurred where small numbers of pigs were kept?—I said that it was a fact that only small numbers of pigs were maintained where outbreaks did occur. That arose in my idea from this, that the persons, generally speaking, who own these pigs where the outbreaks occur are persons who go to market or some other places and buy two or three or three or four, fat them, and then sell them off.

592. Would not the habit of buying them be the same in large feeding herds of pigs; the owners of those would likewise go to market, would they not? I think not; for this reason, that a person who bought largely would go to a different source for his pigs.

593. While you were giving your evidence I was adding up the figures for Midlothian, and I find that in Midlothian the average number of pigs in the infected places is 30?—I took the average number of animals that were affected during the years 1891 and 1892.

594. There was, I thought, an interesting statement in your evidence. You began to say that by some action on the part of the county authorities this wilful dissemination of disease by dealers had been stopped or mitigated. I do not think you quite finished what you were going to say?—I think you can mainly attribute the decrease in the number of outbreaks in the latter part of 1891 and in 1892 compared with previous years, to the fact that attention had been generally called to the action taken by Mr. Chaplin and others two years since. I think the paper that I read before the Norfolk Chamber of Agriculture was published in all the papers, and the attention of the local authorities was called to the neglect of their officers, and to the want of some system for tracing out the sources of the outbreaks of the disease.

595. There has been more careful attention to their duties in exercising the authority they possess?—Yes; take this case of the Sussex people—until recently I believe, they never thought of tracing out a case of swine fever.

596. You said that you thought that in well-managed herds you were not likely to have swine fever; do you take any special precautions, in addition to those you have mentioned of not going to markets, to which you attribute your immunity from disease?—No, except general management. Where you have a large number in one place the chances are that they will be less healthy than where you keep a small number.

597. It was rather to lead up to this question that I asked you that—Have you any intercourse with your small neighbours as to the selling of pigs?—No.

598. Are you in the habit of selling pigs to the small people about you?—No.

599. Therefore, your small pigowners do not have access into your sties?—At one time I used to allow the labourers and small farmers in the village to send their sows to one of my boars. I used to keep a boar pretty well for their purpose, and they reaped very great benefit from it until two or three of them would persist in going to market, and then I stopped it. I never suffered from it, because I generally used to keep this boar away, but I thought—"Well, if you "will go to market and buy these market pigs, and "then in the course of a few days bring the sow to "my boar"—because, perhaps, they would go and buy a sow and bring it to my boar—"I cannot tell "where the disease is going to stop."

600. Supposing a man whom you knew to be a pig

owner, and whom you might suspect of having swine fever, were to come to your establishment for the purpose of buying a pig, would you admit him into your premises ?—Certainly not, if I knew of it, unless I was certain that he had taken sufficient precautions.

601. You believe then that infection can be conveyed by the feet of human beings ?—Undoubtedly.

602. In your district is there any traffic in pigs conveyed in carts. Are pigs conveyed habitually in dealers' carts as opposed to railway carriage ?—In both. I should think that dealers' carts and dealers' yards are a frequent source of infection.

603. They are conveyed in dealers' carts ?—Yes, but not very much in dealers' carts. I can give you an instance which will perhaps bear out this. There was one outbreak in our county that we could not find any reason for, until we discovered that the man had sent a sow to a boar belonging to a dealer ; he had sent it to the dealer's yard. That was the only source of infection that we could trace. Of course, the dealer's yard was not an infected place but according to my idea it ought to have been.

604. (*Sir Jacob Wilson.*) If there was disease there ?—No doubt there was. The sow would not have got it if there had not been disease there.

605. (*Mr. Wardlaw Ramsay.*) I would like to know whether you would attach any importance to the licensing of piggeries ?—Not the slightest.

606. It would be no protection ?—Not the slightest, and I attach very little importance to the issuing of licenses from the various counties, or from one county to another.

607. (*Mr. Stephenson.*) I think I have gathered from you that you have not much faith in the declaring of large areas for stopping the disease ?—None at all ; I do not believe in the necessity for them.

608. Now as to this outbreak where you had swine fever within 400 yards of your own premises ; that would be declared an infected place I take it ?—Yes.

609. Were you in that infected place ?—I cannot say ; we have had two or three outbreaks within a quarter of a mile.

610. Were you within or without that infected place which was within 400 yards of your own premises ?—I cannot remember.

611. Was your trade stopped ?—No.

612. Then, you were not within it ?—I was not within the infected place, but I do not know whether at that time they declared an infected area.

613. It would be a very small area and a small place ?—I do not remember ever being affected by being within an infected area. That would be a sufficient answer to your question, I think.

614. Will you tell me what precaution did you use to protect yourself when you had it within 400 yards of yourself ?—I kept my people away from the place and took good care that no pigs went near. Beyond that I took no other precautions because I did not think them necessary.

615. Did dealers come to you to buy pigs ?—They never come to my place.

616. Do strangers come to buy pigs ?—They would be from a distance.

617. Then when the veterinary surgeon and the superintendent of police came to inquire into the disease, you say, I think, that you allowed them to go through your premises ?—Yes.

618. And to examine your pigs ?—Yes.

619. Did you do that without ascertaining that they were perfectly free from disease themselves ?—I have such a high opinion of the veterinary profession that I felt sure that the surgeon would disinfect himself, but at that time, I believe we had not in our division a case of the disease.

620. Bnt he had come from a diseased place ?—No ; the outbreak took place in Sussex.

621. Was he not the Sussex veterinary surgeon ?—No, he was not the Sussex veterinary surgeon ; he was the veterinary surgeon of the district, the divisional veterinary surgeon. The police in the county of Sussex, near Hastings, communicated with the police in our division to inquire as to this—whether or not a breach had been committed by me in sending pigs away which at the time were diseased, or which had been in contact with animals diseased, for the reason that the veterinary surgeon in the Hastings division had given it as his opinion that the pigs when they left Holywell or St. Ives were infected, and that they must have taken the disease with them.

622. Now, you have told us about the death of one of your sows from heart disease, and you say she had a red skin ?—It was purple.

623. Is it your experience that whatever ails a pig the probabilities are that the skin is discoloured ?—It is almost certain to be after death.

624. But before death ?—And in the majority of cases before death.

625. From whatever disease it suffers ?—From whatever disease it suffers.

626. Therefore a red skin is not indicative of swine fever alone ?—It is a no more distinguishing symptom than anything else.

627. I was very much interested in what you said about pedigree pigs being weaker than common stock. Is that really true ?—No.

628. But you said so ?—No. I said that in the majority of cases it does not follow that they should be ; but where, as in some breeds of cattle, more attention has been paid to breeding from certain strains or line breeding than breeding from sound animals, no doubt the constitutions of these animals so bred are weaker than they would be where judicious care has been taken, or where common crossing and intermingling has been followed.

629. But I take it that if the sire and the dam were found the pedigree does not add to the weakness ?—The pedigree, in my opinion, has not anything at all to do with the matter. The question is whether, at the time of copulation, the parents are sound. The animals themselves may be sound, but yet they may, one or the other of them, have been bred from animals with a predisposition to disease ; then you often get it in the next generation, more often than not.

630. I will not follow that any farther. In your opinion are pigs liable to tuberculosis ?—No doubt about that.

631. You have seen that ?—I have not the slightest doubt about it.

632. You spoke of a pig which had been sent away having died in a truck ?—Yes.

633. Is it a fact that pigs, even where slightly affected with disease, if put into a truck and sent a journey, will die quickly and suddenly ?—No doubt of it. I should say that they would die more quickly, because, you see, they have not only the disease to combat, but they would also have the excitement, and so on, and they would necessarily be less able to withstand the disease.

634. You seem to think that this disease ought to be taken in hand by the Board of Agriculture ; that is your first point ?—Certainly.

635. And then you said the question of the veterinary inspector's ability to diagnose the disease was for the Board of Agriculture ; and you went this far, that you said in three months, if outbreaks were traced out, the disease would be very greatly reduced. Now do you really think that three months would have an appreciable effect upon the presence of swine fever in the country ?—I have not the least doubt about it.

636. Three months ?—I have not the least doubt about it. I should say as soon as an Act were passed, or as soon as it was vested in the central authority, the first effect of that would be an increased number of reported outbreaks — a considerably increased number—and that within three months time we should have the number of outbreaks reduced 50 per cent. at least ; and that within nine months, in my opinion,

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we should be pretty nearly free from it; for this reason more particularly, that with swine fever there would be no persons sufficiently interested in the question as to make it worth their while to introduce into the country the virus of swine fever. You see the importation of pigs from abroad is, comparatively speaking, nothing; there is no vested interest in it. I believe in nine months that, if the Board of Agriculture were to seriously take it in hand, swine fever, by that time, would be confined to very limited areas, if not entirely stamped out.

637. I took it down on my notes that you said that if the Board of Agriculture took this in hand it would have the same effect as their pleuro-pneumonia action has had, and that you say so because swine fever will show itself in five or ten days?—It would be more easily and more quickly treated than pleuro-pneumonia.

638. Do you not know that swine fever is very much more easily carried and spread than pleuro-pneumonia?—Undoubtedly, because in one case you must have mediate contact, and in the other it is not necessary.

639. Does not that add very much to the trouble of stamping out swine fever?—I think not.

640. Not the fact that it is spread by mediate contact?—I think not, for this reason, that the conditions under which the animals are kept are so entirely different. I have no doubt that an animal may be affected with pleuro-pneumonia for weeks, and yet that fact may not come to the knowledge of the owner or of anyone interested; whereas with a case of swine fever it is bound to show itself within a few days.

641. In how many days?—It varies—within a fortnight. It is almost always within a fortnight. I should say from five to nine days.

642. There are variations in the appearances of swine fever?—No doubt about that.

643. You are not prepared to speak as to the *post-mortem* appearances. I take it you have not seen those?—That is not in my province.

644. You say that limited restriction upon movement, slaughter, and compensation are all that is required?—If you will allow me just to make a remark—I think you were asking about the *post-mortem* appearances and so on—I am inclined to think that in 95 per cent. there need be no difficulty in a veterinary surgeon arriving at a decision as to whether or not it is swine fever. There may be occasional cases where it is doubtful, but they are very occasional.

645. Tell me why you think only a small area need be closed up for swine fever?—For the reason that there is little fear of its escaping from the point where the disease breaks out.

646. If it is so easily carried as you make out by rats and pigeons, why should we not have a very large area, and why should not all the pigeons, and rats, and cats, and dogs in that particular area be shot and got rid of, if we are to get rid of swine fever?—I can give you perhaps as short an answer as possible—that it does not happen so.

647. What, in your opinion, is the best means of disinfecting a swine-fever infected place?—It would very much depend on the material of which it is composed; the floor and so on.

648. What would you suggest?—If it were an old shed, as most of them are, made of railway sleepers or something of that kind, I should set fire to it; if not, I should use boiling water, or boiling tar, or a mixture of carbolic acid and whitewash. If you use boiling tar it enters into every crevice, and wherever it touches it is bound to destroy the germ. It fumigates and sweetens the place, and does good in that way.

649. Have you any experience of carbolic acid disinfection for pigs?—I used to use it years ago when swine fever was so very general. I escaped swine fever then; and since I have left off using it I have escaped swine fever, so I really cannot say that I saw any benefits arising from it. No doubt the carbolic acid will destroy every germ with which it comes in contact.

650. (*Mr. Joseph Smith.*) Would you mind telling me about how many pigs you have in your herd?—It varies. At Christmas I had nearly 500; now I have sold a great many, and I should not think I have more than 370; but I really do not know.

651. (*Mr. Stephenson.*) You are against giving notice to the police, I think?—No.

652. You would favour giving direct notice to the veterinary inspector or to the surgeon?—No; what I say is this: that objection has been made by several persons of their not being enabled to give notice to the veterinary surgeon, or to the police, as they wish. I would suggest that it should be obligatory that the person should either be at liberty to give the veterinary inspector of the division notice, or to give notice to the police, one or the other; then there could be no objection.

653. Now does it strike you that by giving notice to the police he is free from having to pay any fee. If it passes through the police's hands and the police call in a veterinary inspector, the owner of the pig has nothing more to do with it, or to pay, whereas, if he goes to a veterinary surgeon he lays himself open to paying a fee?—If my suggestion were adopted it would remove that difficulty.

654. (*Professor Brown.*) An inspector could not take a fee, it would be contrary to the Act?—I believe that would be so.

655. I understood you to say that he should give notice to the inspector?—To the veterinary inspector of the division in which the outbreak occurs, and in which the person is resident. Then there would be no charge made, because the inspector would go and tell the policeman eventually; if he chose he might go and make an inspection, but the result would be the same in the end. Some persons, country people (I do not say that there is any reason for it; in fact, I should say there is no sense in it), object to the notice to the police, and our object should be to remove as many objections as far as we possibly can. It is a sentimental grievance.

656. Would not the police be easier got at than the veterinary inspector?—No doubt, in the majority of cases; but then there are certain people who object to go to the police; you can not alter their nature. It is a sentimental grievance; but it is certainly a grievance that does exist.

657. (*Mr. Joseph Smith.*) How long is it since your county dropped compensation?—I cannot tell you; I really do not remember.

658. Do you think, as it was carried out, it did any good?—Undoubtedly; but I think the steps that were taken to trace every case of outbreak, the persistent steps, have done much more good.

659. I understand you think that what is more requisite is the tracing out of the origin?—I should not like to say it was more required. I should say that both were required. But the effect of the one was far greater, for the simple reason that other outside counties did not adopt the same practice as our county, and our county was made use of by persons living in other counties where these steps were not taken.

660. Do you think there were many pigs paid for which had not swine fever?—It would be rather a reflection on the veterinary profession if I were to say I think there was, but I fancy a good many pigs have been declared to be suffering from swine fever when they were not.

661. There is an impression in a good many districts that when they were compensated for people did make a market of it?—I can give you something that will bear on that question. In one division of our county some few years since outbreaks were very numerous and continuous, and steps were taken to bring this to the notice of the central authority, the County Council. The Board of Agriculture were

communicated with, and Professor Brown sent one of his inspectors down; I forget now who came down. The result was that the outbreaks ceased almost entirely, very quickly after the appearance of the inspector. That, to my mind, proved that the objection I made to it was a valid one, and that there was either want of knowledge or want of honesty on the part of either the veterinary inspector or the superintendent of police, or perhaps both. The mere object of being able to appeal to a central authority, the Board of Agriculture, was that an independent body was sent down, and this was proved, and satisfactorily proved, I believe, because the outbreak ceased very quickly after the visit. It was in the division of Ramsey. Since then there have not been any more cases in that division, although it is thickly populated. There are a great many small farms and a great many pigs kept there. That proved there was a want of something.

662. In your opinion, are certain sized pigs, pigs of a certain age, more liable to take the disease than others; do you think that older pigs, full-grown pigs, are quite as liable to take the disease as younger ones?—It very much depends on the powers of resistance. You may get certain ages of pigs, as of human beings and of all other animals, which are more susceptible to diseases. I think it does not matter whether the pig is old or young if you put it in a place where there is a swine-fever infected pig; nine hundred and ninety times out of a thousand the pig will contract the disease and be able to carry it away with him. I do not think it is a matter of age, and I do not think pigs of a certain age are more susceptible to swine fever than those of another age. I think that is what you are trying to ascertain.

663. (*Mr. Carrington Smith.*) Do you ever allow sows to come to your boars?—Yes, I have one there now. It came from Essex, but I took the precaution to find whether or not there was any swine fever in the neighbourhood, and it was from a friend of a friend of mine. I do not allow the public to send.

664. How about castration, do you allow that?—Never.

665. You never allow a man on your premises for that?—No, I never castrate pigs.

666. With reference to these crates, you said they are a source of disease; you know they are not included in the Act; what would you do with respect to making the crates safe?—I do not see that you can do anything unless you send pigs in them to London and make the pigs into pork. I do not see what you can do except that you can prove that pigs conveyed in these crates do become infected with swine fever. Then the crates in which they were carried you would be able to treat under the Act, would you not, just the same as you could deal with pigsties.

667. (*Mr. Shaw.*) You stated that you believed that swine fever was an imported disease. When you say "imported" do you mean imported from abroad, or do you mean imported from county to county?—An imported disease, to my mind, would be one imported into this country from another country.

668. There would not be any live pigs coming into this country from abroad nowadays?—Certainly, none at all.

669. Then we may assume that there has not been continued importation, that the disease has been once imported and then has stuck to the country?—Undoubtedly.

670. Have you any idea in your mind that such a thing as Indian corn imported from America may have the effect of producing swine fever; I may as well mention that the reason I ask the question is because in Ireland among the poorer classes there is an idea that they never had swine fever there till we had Indian corn used for pig-feeding?—I do not see how it is possible, because Indian corn does not within itself contain the germs of disease, and you cannot have swine fever until you get the germs of disease.

671. You state that it is always on thoroughly well-managed pig places that there is never any disease?—Except where they buy pigs from outside. When I said thoroughly well-managed places I meant places where the owner makes his herd feed itself, if you understand what I mean. If I were to go to various places to buy pigs, as has been the custom in some which were considered to be well-managed herds, I should get swine fever. I could mention several herds which at the present time are considered or have been considered well-managed, and yet there they have had swine fever. But the cause of that was very easily found out. They simply went to York, or to some of the other markets; the persons who sent the pigs bought them at the markets, and so sent the pigs and the infection at the same time. I do not know that I have expressed myself quite clearly, but my meaning is this, that it is impossible for an outbreak of swine fever to occur at a place unless through the introduction of swine-fever virus by some means or other. I do not think I fully explained myself before.

672. In Denmark, where you admit the management of pigs is pretty good, they have had within the last three months a very severe outbreak of swine fever?—Yes, I know they have, but that does not affect my answer at all.

673. I did not say it did. With regard to Servia you stated that that was a great hotbed of disease?—It is said to be.

674. Is it not a fact that the swine there are kept in a semi-natural condition?—That is the reason I gave for the prevalence of swine fever in Servia.

675. They are kept under semi-natural conditions, running about?—Running wild. I forget the words I used, but that was the reason I gave for the prevalence of swine fever.

676. You said, I believe, that you did not believe in cleanliness?—No, I did not, or if I said so I must have expressed myself badly.

677. I understood you to say that it did not matter much?—I said that it did not occur from the want of cleanliness, because you will see that in the dirtiest places swine fever does not arise from the want of cleanliness.

678. Do you not think one of the important conditions of a well-kept herd is to keep them clean?—Undoubtedly; and then, if you will excuse me further, I will say this, that if a place were in a bad condition and a person were to come on to it having attached to his boots the virus of swine fever, he would be much more likely to leave it in a place where dirt, that is, litter, "muck" as we call it, is lying about, because he would walk in the manure and the moisture in the manure would absorb, or take away, or come in contact with, and carry within itself the germs of the disease, whereas in a well-kept place there would be nothing for the germs to become attached to.

679. Did you not use disinfectants at the time that you had swine fever within 400 yards of you?—I really cannot say.

680. When was it you had swine fever within 400 yards of you?—I really do not know. I should think it was about eight or ten years since. I really do not know, there are so many things which have occurred since.

681. (*Mr. Stephenson.*) You are sure it was swine fever?—I have not the slightest doubt about it.

682. (*Mr. Shaw.*) In quoting the figures of 1892 you mentioned that there was a considerable falling off in the number of swine reported as being diseased; is it not possible that that falling off is caused by something in addition to the railway rates?—It was in January 1893 that the alteration of the railway rates affected the outbreaks.

683. Did you not say in 1892 also?—In 1892 the railway rates had nothing to do with it.

684. The returns for 1893 are not published yet?—

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Yes, there are weekly returns. I must have misunderstood the question. I believe I said, or at all events I intended to say, that I considered the decrease in the outbreaks of swine fever in 1892 was, in my opinion, attributable to a great extent to the steps which were taken in the spring of 1891 to bring before the local authorities their neglect in carrying out the restrictions.

685. Does it not occur to you that the reduced number of swine reported as having been attacked might naturally have been caused by the falling off by 33 per cent. of the entire supply of the pigs of the country ?—Are we reducing by that much ?

686. Something like that, at least you have said so yourself in a letter ?—It might have had some effect, but I think you will find that the outbreaks in the end of the year 1891 are less than the average; there was a reduction at the end of the year 1891.

687. Many counties dropped out of giving compensation in 1891, I think. Do you believe that would have the effect of reducing the number of swine-fever cases reported to the authorities ?—No doubt, if it were so.

688. You mention that there is a certain risk run by the stations where a boar is standing; do you think it would be any use to have these boar stations subject to inspection of some sort, inasmuch as so many sows visit these particular places ?—There is this to be considered with respect to keeping a place in a cleanly or in a dirty state. Suppose these sows have at the time been in contact, or in a place where animals are suffering from swine fever, they might carry on their feet the germs and leave them behind in a place that is dirty, but I do not think that your inspection of these places ; I do not know what you call them in Ireland——

689. Boar stations ?—I do not think the inspection of them would make any difference.

690. For instance, the Royal Dublin Society has boar stations at a low service ?—I know, but I do not see what benefit this would be.

691. The custom in Ireland, in many places, is that the sow goes to the boar and the sow remains very often for three weeks. Some of them come from long distances. Do you not think that if there were a number of sows coming from different districts it would be desirable to have some inspection of that station ?—I think the most valuable thing, or the best thing you can do, is to take such steps that no animal sent there could be an animal which had been in contact with a pig suffering from swine fever.

692. True ?—The mere fact of your having these boar stations inspected I do not see would have the slightest effect, except this, that persons who were in charge of the boar stations would be more ready to give notice of any suspicious cases amongst any of the sows.

693. Is it not clearly the boar-keeper's interest not to report a case of this sort ?—I think not, for this reason, that if it is a case of swine fever it is bound to come out, if your local authorities attend to their business, because it is bound to be traced. It is almost impossible for an outbreak of swine fever to take place without its being traced to its source.

694. Yes, but you admit that in the past the local authorities have not been doing their work properly ? —No; and that to my mind is one of the causes of the number of outbreaks of the disease, and also of the reduction in the number of outbreaks, because the local authorities have attended to their business better within the last 18 months, far better, both for their own sake as well as other people's, and the veterinary inspectors, too, have been put on their mettle.

695. (*Sir Jacob Wilson.*) I think it would add very much to the importance of your evidence if you could give us the normal size of your herd ?—It varies.

696. I know a herd of pigs necessarily varies because of the litters, but would you give us the standard number of your sows ?—They vary too. The number varies for one reason in this way : perhaps during the year I put 200 young sows to the boar; if I have a keen demand every one of those young sows will be sold, except those I wish to retain for myself. If, as we did at the end of 1891, we got a slow trade, I may have 40 or 50 of those young sows left on my hands; these I pig down.

697. Can you tell the Committee the number of breeding sows you had in pig, or suckling young pigs, on the 1st of January this year ?—I can guess. I should think about 60, and about 12 boars, but I really do not know.

698. What would be the total number of pigs altogether that you had on the place ?—On the 1st of January I should think about 460 to 480; at the present time about 360.

699. I gathered from what you said that you do not practise castration. From that do I understand that you do not admit any professional castrator ? —I never want him ; and if I did I should make some objection to his coming. I should castrate them myself.

700. What castration is done I take it is done by yourself or your men ?—I never do it.

701. In the case of a young boar which has been injured do you feed him off and sell him fat ?— He has his throat cut and he comes to London.

702. Yours is a unique case of a breeder who never castrates ?—I have not had a pig castrated for twenty years, except one pen that I thought I would castrate and show. I think that was in 1881, and I wanted to show at the Smithfield Show. I thought I would have a good pen, and I had them castrated to show, but I had better have sold them and showed some sows.

703. I take it that the surplus stock which you naturally must have are sold as pork ?— They are killed and sent to London.

704. All sold as dead ?—All sent as dead.

705. At what age would that generally be ?— As soon as I find that they are not good enough for stock. I never attempt to keep an animal which is not good enough ; as soon as I discover, or think that I discover, that it is not good enough or not likely to be good enough for breeding purposes, its throat is cut, no matter what its condition.

706. Would that be about three months old ?— It would vary very much, because you may keep an animal until it is four or five months old, and especially in the winter time, when it may be rheumatic or crampy, or it may show signs of rupture, or as the Germans say, may gather water in its pizzle, or a hundred and one things.

707. Your trade is chiefly in high-bred pigs for breeding purposes, is it not ?—My object is to breed as many pigs as I possibly can to sell for breeding purposes to whoever comes.

708. You export a number of these for breeding purposes ?—Yes ; I think I have exported to thirty-three or thirty-four foreign countries and colonies, to all parts of the world.

709. May I ask whether in the applications which come, I suppose a good many by letter, any question is asked you whether you have ever had swine fever on your premises ?—Yes, frequently.

710. They do ask the question ?—Frequently ; but I think not of late years, I take it for the reason that my name is known, but I used to have the question asked. My answer is that I have frequently had questions asked as to whether or not my herd was free from swine fever, or whether swine fever had existed in my herd.

711. We have heard of serious outbreaks in Denmark and elsewhere ; are you aware whether the authorities in Denmark attribute the outbreak there to the importation of English pigs ?—I have been in correspondence with the authorities, the Danish Government, and the Veterinary Department,

and they have not to me stated that that is their belief—not at the present time—but I know that some years since, both in Denmark and Sweden, English pigs were credited with taking swine fever into their country.

712. Have you any reason to believe that swine fever has been frequently communicated through the medium of the boar?—In what way do you mean?

713. By a man sending his sow to a boar?—It would not unless the boar was infected.

714. I am putting it to you as a matter of fact, I only want to get the fact. Are you aware of any cases of swine fever having been communicated by a boar?—Yes.

715. You do know of a case?—Yes, I know of a case, at least a case was reported to me by Mr. Olver, who is the veterinary inspector at Warwick, I think. There was another case in our own district. A boar had been affected with swine fever and had recovered. Two young sows were sent him and both became infected with swine fever.

716. Now when the disease was within 400 yards of you were you very seriously alarmed?—I do not know, I am sure—it is some time since; I have no doubt I might have been.

717. It has not made the impression upon you that I should have expected; then you did not regard it as anything very serious in those days?—I am afraid I do not look upon swine fever in quite so serious a light as some people do, because I am convinced of the necessity of the swine fever virus being carried in some form or another before an outbreak of swine fever occurs. Many people think that it can be taken by the wind, and all kinds of things.

718. But you have already shown us that it can be carried by pigeons?—Undoubtedly.

719. I take it that the rats, and cats, and pigeons within the 400 yards were naturally an element of danger to you?—They would be, except that I hope my cats do not stray.

720. The fact remains that they were an element of danger?—Undoubtedly, but I took steps to get these pigs slaughtered at once.

721. Now, Mr. Stephenson asked you what you did particularly, and you said you did nothing except keep the pigs off?—Mr. Stephenson, unless I am mistaken, said what precautions did I take with my own animals? With my own animals I took none at all, but the moment an outbreak takes place in our village, which is a large parish of nearly 3,000 acres, the veterinary inspector tells me, as I have asked him to do; in the case of all the outbreaks that take place in the division, I see or send to the person who is the owner of the pigs, and offer him compensation if he will slaughter, since the county have failed to do it. So that I take those very steps which I should wish the Government to take.

722. Then that was one very important precaution that you took?—That was not with my own animals; it was with others.

723. It was for the sake of your own animals. To turn now to a subject upon which you were questioned a little while ago; will you just tell us, so that we may get it upon the Notes, what is the usual age at which these pigs are sent in such numbers in crates which are such an element of danger?—I should think, generally speaking, before they are four months old.

724. May I take it then about from two to three months?—From six weeks to four months. The object in sending them young is because they can send so many more at the same cost for carriage.

725. I rather gather from you that you consider that the time has arrived when the veterinary surgeon ought to be able to detect at once cases of swine fever?—No, I do not think I expressed myself so. I did not intend to do so. I said that I think the time has arrived when a veterinary surgeon ought to be able after a *post mortem* examination to state positively whether or not it is a case of swine fever.

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726. Would you not consider it necessary for a veterinary inspector who was called in to take into consideration the history of the circumstances of that case as well as the external appearance of the pig?—In my opinion not in the slightest degree necessary.

727. Now the outcome of all this evidence appears to me to be this, that you have no faith in local administration, and that you look to the transfer of the administration in the future to an imperial authority?—I do not think that I expressed myself quite so. I think I said that the general administration of the local authorities was undoubtedly deficient, but that there are some counties which are quite efficient.

728. I put it shortly then, do you recommend in future that it should be administered by the Board of Agriculture?—Undoubtedly, certainly.

729. Upon the same footing as pleuro-pneumonia is now being administered—as a general principle?—As a general principle undoubtedly, but I think at the present time the outbreaks are so distributed.

730. That is a detail, but you think so as a general principle?—Yes.

731. Are you aware, if that be so, that the function of the local authority would still remain as it it is at present, with the exception of compulsory slaughter and the payment of compensation from the imperial funds?—It would not, would it?

732. I only ask you, are you aware that it would?—No, I am not, because I do not think it would.

733. Then you are not aware?—There is an important difference, if you will excuse me for a moment. I think in the case of pleuro-pneumonia the lungs must be sent up to the Veterinary College.

734. Now wherein lies the difference between the administration of pleuro-pneumonia and swine fever so far as you would wish to see it carried out?—The difference under the alteration would be this, to my mind, that the local authorities then would be answerable to the central authority. At the present time they are answerable to no one. Under the Contagious Diseases Animals Act, as it at present exists, the local authorities have some one over them, but now with regard to swine fever they are entirely their own masters. Some do their duty, and some do it in a very perfunctory manner. Under the alteration they would be answerable, and they would be responsible to a central authority. At the present time they are responsible to no one except the persons in the district.

735. Those are the conditions which existed before pleuro-pneumonia was put under the central authority, so I come back to it again?—Quite so, and that bears out my argument.

736. There is no argument necessary in it, it is a question of facts?—The contention then.

737. I only wish to bring out that the local authorities would not be deprived of the privilege of administration, except so far as concerned compulsory slaughter and the payment of compensation?—Yes, that is all.

738. (*Professor Brown.*) With reference to this case of the sow which you lost, did you happen to see the heart opened?—Yes, it was very much enlarged, soft, and flabby. I did not make a thorough examination of it because I felt sure from the symptoms that that was the cause of it. When it was opened the heart was, as I say, very much enlarged and soft and flabby, and so I did not take any further steps about it. I simply had the carcase cut open with a knife and looked at the heart first, and as I thought I saw there sufficient cause of death I took no further steps in the matter.

739. You made some remarks about the movement of in-contact pigs being a great cause of the spread of the disease?—Undoubtedly the only cause.

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740. We have been told by one witness, who rather told it as a complaint, that while pigs were checked in their movement by road by their local authorities they had practically unlimited movement by rail. Would you propose to make any restriction at all in reference to the movement of pigs by railway?—No, nor yet by road in the case of healthy pigs or pigs that have not been in contact. I do not think that the mere fact that freedom exists in the movement of pigs has the slightest effect on the outbreaks of swine fever, providing only, that those animals that are moved are sound.

741. Moving healthy pigs cannot do any harm, but the fact that pigs can move freely from one place suggests that they may be moved whether they are healthy or infected?—The steps I should feel inclined to take would be these: If you have an outbreak of disease, trace it to its source and make inquiries, and if you find that not only does this outbreak of swine fever originate from this place, parish, or district, but that many others have done so, I would close that district or let it be understood that those steps will be taken. It would then be to the advantage of the persons who had business in the district, such as auctioneers, to take the necessary steps to prevent the movement of or the sale of these animals.

742. That is the point that you would make, that prevention of movement should be applied to their movement by railway as well as by road?—Except through the place.

743. You would allow them to go through the place?—Undoubtedly, because I do not see what effect it could have.

744. The fact of their going through implies, does it not, that they would go somewhere?—No, not necessarily. What I mean is this. Suppose, for instance, you shut up Huntingdon; you say the borough of Huntingdon is an infected area or circle; the mere fact of my sending pigs from St. Ives through Huntingdon by railway cannot have the slightest effect on the transmission of the disease from the infected area or place. I would not interfere in the slightest with the movement of pigs through an infected area in a railway truck.

745. Would you allow them to stop in that area?—I would allow them to stop, provided they are not unloaded. I would not allow them to stop except for the ordinary purposes of transit. I believe with one or two of the foreign countries it has been a condition that they should leave my place and should not be untrucked. I believe that was the case with Denmark in sending the last lot of pigs that I sent to that country. One of the conditions was that the animals should be loaded at St. Ives, that they should proceed in the crates in the same truck to the ship's side, and should be then loaded—that is, that they should not be transhipped so long as they were in England.

746. Then you would not interfere with the present arrangements in regard to the carriage by railway?—I do not think there is the slightest chance of any harm coming from that.

747. Do you consider it very important to trace the origin of the outbreaks as was done in the case of pleuro-pneumonia?—In my opinion it will be impossible to extirpate swine fever unless you do.

748. Do you consider that that can only be done effectually by a central authority, because the local authority having its jurisdiction confined to its own district is unable to carry its investigations beyond that district?—The mere fact of the local authority not having done so is a sufficient proof of the opinion I expressed that it was desirable to have the central authority to undertake this. It certainly is my opinion that it is necessary that all the powers which are vested in the central authority by the Pleuro-Pneumonia Act should apply to swine fever.

749. And something besides?—I say all the powers that are vested in the central authority by the Pleuro-Pneumonia Act should be vested in the central authority in connection with swine fever, and other powers of course in addition.

750. You consider it very important to identify the the disease?—Undoubtedly.

751. And make sure that it is swine fever?—Undoubtedly.

752. As is done in the case of pleuro-pneumonia?—Yes, and for that purpose I should give every person who has an outbreak or reported outbreak of disease at his place opportunity if he chooses of having the intestines of a pig which was declared after a *post mortem* to be suffering from swine fever, sent up to the College at the expense of the local authorities or of the central authority—the local authority, say.

753. Would there be any danger in that transit?—Not necessarily. I do not see that there is any danger myself, because there would be only a necessity for a small portion of the intestines to be sent up, and I have it so secured that there should be no opportunity for the virus to escape from the box or bottle.

754. Do you think it would be an advantage if all the cases of swine fever were tested in that way as a matter of course, as was done with pleuro-pneumonia?—I do not think there is any necessity for it. Take some case where there are three or four pigs at a place. A man goes to market and buys a couple of pigs. They come home; one is taken ill and dies. The veterinary inspector in the district makes a *post mortem* and satisfies himself that it is a case of swine fever. If compensation, as I say, is made to the value of the animal, the owner loses nothing by the pig being slaughtered, so that it cannot do him any injustice, even if it were not a case of swine fever. But then, why I should suggest that there should be a power of appealing to the College is, suppose an outbreak, or supposed outbreak, of swine fever takes place in my herd, and the local veterinary inspector were to make a *post mortem* and say "swine fever," I should then certainly send it up to the College.

755. It comes to this, that you would allow anyone who wished to do so to send morbid parts to be examined, but you would not make it a general system?—That is my opinion.

756. You say with reference to the maximum value of the animals you would fix 7*l.*?—If you must have a limit, but I should say the value.

757. It is absolutely essential that you must; that is quite certain. I am told by Lincolnshire farmers that many a cottager has a fat pig worth 10*l.*; do you consider that to be a true statement?—I think you will find that you have had outbreaks occurring where a pig is worth 10*l.*

758. There is no particular objection to go beyond the actual value in the maximum; the objection is, not coming up to it; is that so?—At first I said 8*l.*, and that seemed to excite some surprise in the minds of some gentlemen on the Committee. I should like to so fix the amount of compensation to be paid as to encourage everyone to report a doubtful case. The great secret of the continuance of swine fever in my opinion has been the knowledge that the report of an outbreak of swine fever was more likely to be a source of loss than of gain to the owners, and that that has been one of the causes of the spread of swine fever in my opinion.

759. In reference to the notice of disease, are you aware that the owner at present has the option of giving notice to the inspector besides giving notice to the policeman; he may do both?—Has that been in force for long?

760. Yes, for a long time; but then he must give notice to the police constable as well. I understand you wish the words of the Act of 1878 to be altered so as to make it optional on the part of the owner whether he will give notice to the police or to the inspector?—That the owner of the diseased pig shall give notice to the police constable in the village or district or to the veterinary inspector of the division

It is, as I have said, a sentimental grievance. I know several people have objected to it; at least they have given that as an excuse perhaps, and you want, if you possibly can, to remove all excuses.

761. (*Sir William Kaye.*) You said there was no difficulty in tracing the source of the disease. Now, I think that is subject to a limit?—I said in 95 per cent. of the cases.

762. Would you say so in a case where the trade is carried on for the most part by small farmers who have only one or two pigs, bought in the market? When the inspector comes and finds the disease and asks where they were purchased, and the owner is unable to give him any account of the swine, where he got them, or anything of the kind; what would you say in such a case?—I can give you a case where it would apply there. An outbreak of swine fever occurred in our division. The inspector came to me and said, "We have got an outbreak of swine fever at so-and-so's place." I said, "Indeed! Where did he buy his pigs?" He said "He bought them at St. Ives of so-and-so." "Where did he get them from?" He says he does not know. "Oh! Did you ask him to let you look at his books?" "Yes, Sir, he said, he did not keep any. What are we to do?" "You are certain the pigs came from his place and then were attacked with swine fever?" "Yes." "Cannot you declare his a suspected place, or tell him that in future you will do so if another outbreak occurs"?—We have had no more swine fever from that dealer's yard. The dealer thought by his saying that he did not know where they came from, and that he kept no books, that he would get out of it.

763. That is a case of a dealer?—Yes; but I think you will find that in ninety-nine cases out of a hundred the disease originates from the yards of a dealer, or, from animals purchased of a dealer, or from a market auction. I do not know whether the veterinary inspector is empowered to declare a place a suspected place, but the threat was held out to this man, and we have no more cases from his yard.

[The Witness withdrew.

(Adjourned for a short time.)

PROFESSOR THOMAS WALLEY, called in; and Examined.

764. (*Chairman.*) You are head of Dick's Veterinary College of Edinburgh?—Yes.

765. You have had your attention naturally drawn to the whole question of diseases of animals?—Yes, I have.

766. Amongst others, to swine fever?—Yes.

767. Will you tell us your earliest experience?—The earliest experience I had, that I can at any rate recollect, was about 1865, at the cattle plague time, in West Derby, near Liverpool. I had seen something of it before, but that is the most vivid recollection I have of it.

768. When was your earliest experience in Edinburgh?—About 1872 or 1873—1872, I think; the first year, at any rate, that I was in Edinburgh.

769. I think you also act, do you not, as inspector for one of the local authorities?—Since 1878 I have acted as inspector for the Local Authority.

770. Would you state to us any special cases of outbreak which your Edinburgh experience has given you with regard to this disease, and the result of your observation on them?—The first case I saw in Edinburgh was at Trinity, at Lawson's Nursery, about 1872 or 1873. Those were very few in number, and the disease was easily got rid of. Then I recollect also distinctly about that same year or the following year—I think it must have been in the year 1873—that Mr. Cunningham, of Slateford, came to the College, and said that he had a serious outbreak of pig disease to contend with. That would be at Dalry or Gorgie. On *post-mortem* examination the disease was recognised as swine fever. About 1885 or 1886 we had the largest outbreak of swine fever at Dalry, near Edinburgh. Since that time we have had a large number of outbreaks there, continually almost, breaking out about every year or two, or every two or three years, until within the last year.

771. To what do you attribute the frequency of swine fever at Dalry?—Simply to the abominable sanitary conditions and the whole arrangement of the place. I have here a copy of the plan of the district, which was furnished to me yesterday by Mr. Campbell, the Clerk to the Local Authority, which will give you an idea, I think, better than anything I can say to you (*handing in plan, and explaining same*). The piggeries at Dalry at the time of the outbreak in 1885 or 1886, which were situated within two miles of the centre of Edinburgh, contained 2,000 pigs, the property of 51 owners. I think the largest number of pigs in any one of those places would be about 100.

772. You said just now that you attributed this outbreak to the filthy condition?—I attributed the prolongation of the outbreak to that, but how it originated I cannot, of course, pretend to say—that is to say, I cannot see how it was introduced into there. It seemed to be the legend amongst the pig feeders that it was always there more or less.

773. What has happened in that district since—are these piggeries still in existence?—No, there are now only, I think, about three piggeries there, and they are gradually being swept away. A large proportion of that is built over now.

774. Was it the result of the action of the sanitary authority that these piggeries disappeared, or simply because the land became valuable, and it was built over?—Because the land became valuable. The sanitary authority had no power over the matter because there were no dwellings, and until dwellings were erected they had no power over it.

775. Now will you proceed to tell us any other case that you specially wish to mention?—I had occasion about 1884 to investigate an outbreak at Dunragit Creamery in Wigtownshire, near Stranraer. There were about 400 pigs there, and the houses had wooden floors and wooden fittings, and generally speaking there was a dirty condition of things.

776. (*Mr. Stephenson.*) Two years before the other outbreak?—Just a year before—1884, I think it was. It had been going on for some time. They got rid of it after a time, and were free from anything of the kind for some time now until last year, when they had an outbreak of what looked like, and probably was, swine erysipelas or rouget.

777. (*Sir Jacob Wilson.*) Was this a dairy farm?—It was a creamery.

778. (*Chairman.*) Were you able to form any conclusion there as to the origin of the disease?—No; it seemed to be introduced from without, but once having found foot in there, it seemed inclined to remain there.

779. How long did that outbreak last?—A considerable period before they got rid of it entirely. I could tell you, perhaps, exactly how long. I only had a letter from the manager this morning. He says: "All the pigs which we then had became more or "less affected, though deaths were not so numerous as "at first; indeed, the character of the disease seemed "to become entirely changed. At first the pigs died "off within a few hours' illness; latterly they lingered "on some time." He does not quite say how long it

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lasted, but it lasted there I know for some little time —some six months or more.

780. (*Mr. Stephenson.*) You had power to kill then, had you?—No; this was under the Local Authority of Wigtownshire, at Stranraer. I could not interfere, except to advise as what they ought to do. They had at that time a stream of water running right past the piggeries, and all the fluid excreta from their own pigs ran into it. I advised them at once to stop that, or they would have the people lower down complaining that they were carrying the disease to them, and he tells me that they did do that. They diverted the stream. At Morningside Asylum, in 1885, I think, there was an outbreak, but there were not the same number concerned. There would be about 70 pigs there, of the best Yorkshire breed. And again, in 1886, there was an outbreak at the same place. There were a large number of others, but these were the most important, I think.

781. (*Chairman.*) I suppose these places were places where the pigs were kept because they could consume the surplus stuff at these establishments?—The Dalry piggeries were fed mainly from the restaurants and hotels in Edinburgh; the Morningside Asylum pigs were fed mainly from the refuse of the asylum itself, supplemented, of course, by meal. I found subsequently—I think it a matter worth mentioning—that the Morningside Asylum people allowed some of the people at Dalry to take away some of their surplus material, and in that way the disease was probably conveyed from Dalry to Morningside by the cart and so on.

782. Did you in the course of your observation of these outbreaks and in other cases form any conclusion in your own mind as to the best way of dealing with the disease?—Yes, I had to do with that. I had, of course, to advise and to see the measures that were adopted, carried out. There were adopted not the kind of measures that I would advise ordinarily. We adopted what we thought the best measures under the circumstances; that is to say, we killed all the diseased animals and all the suspected animals, and watched them very carefully. I think I paid visits there at least twice a week for a long time, and every time I went I had the swine turned out into the yards and looked over them all very carefully and took out what I considered the diseased ones. Then we killed all the small pigs in every lot where the disease made its appearance. For example, if they had got 8 or 10 or 12 shots——

783. (*Mr. Carrington Smith.*) What are they?—Pigs up to two or three months old are all spoken of as shots. If they had about 8 or 10 or 12 of those I said "kill every one of those," because my experience led me to the conclusion that they would go ultimately, and it was only prolonging the disease. That was invariably carried out. If they were fat pigs I advised the owners strongly to remove those at once for slaughter. This advice was generally taken. Indeed I may say it was always taken. At the Morningside Asylum, for instance, we had all the fat pigs removed from there. Of course, we did not pay them for those; they simply sold them on their own responsibility, but they obtained nearly or quite as much for them as if they had sold them in the auction marts. Such disinfection as could be carried out was carried out, and, of course, we put a stop to movement of all kind. As a matter of interest, I may point out that the place at Dalry was not only abominably filthy, with an open sewer running right through the centre of it up between the two rows of piggeries, but that there were swarms of rats there—thousands of them—millions I should think. I advised them, and had it carried out too, that they should pour hot gas-tar down the rats' holes—liquify it with boiling water and pour it down their holes—and as they came out half stupefied kill them. In that manner we got rid of a great number of them. It had become a very common practice that the people were in the habit of taking the sows from one place to the other to the boar, or taking the boar to the sows, but mostly the sows to the boar. That I discovered incidentally and, of course, I put a stop to that. We also put a policeman at each outlet with strict orders to allow no animals out, and to allow no animals in. But the sanitation was so terribly bad that it took us several months before we could release the place. It was from March 1885, until the end of April, or rather of May, before we practically stamped it out, and it was July before we allowed them to go free.

784. (*Mr. Shaw.*) That is two months?—Yes, before the disease was suppressed.

785. (*Chairman.*) That points to the virus having great vitality?—That is a point that I should like, if you will allow me, to make a remark about. In those piggeries there were a great number of brood sows. These sows were, of course, coming in with their litters, and they, to a large extent, kept up the outbreak. In addition to that I am satisfied that the filthy woodwork and all that kind of thing was simply contaminated with the virus and thus kept it about the place longer than it would otherwise have done, and was, in fact, the cause of the repeated outbreaks after it had apparently died away. Those people did not import many pigs. Every now and again a man would import a Yorkshire boar to improve his breed, but very little of that sort was done. They generally bred with their own, one with the other, all the while.

786. They were breeders, in fact?—Yes, with the exception of two or three small dealers, every man had his sows. I may also say that in many cases the young pigs as they were born were very weakly and died off within a comparatively short time unless we killed them. Some of them, of course, went on, and there is no doubt that they perpetuated the disease.

787. Now a few questions in regard to the manifestations of the disease; the scientific aspect of the disease, which naturally you have given a great deal of attention to. What have you to say on that?—In the first place I have seen hundreds of cases where there were no skin lesions at all, where, to look at, no person could say there was any swine fever about them, as far as skin lesions were concerned. On the contrary, I have seen cases where there were hundreds with skin lesions and very few with other lesions; that is, very few internal lesions. Then again I have seen numbers of others with purely enteric lesions, and no lung lesions; and on the contrary, numbers of others with lung lesions, and very slight intestinal lesions. But in young pigs I should point out—very young pigs I mean, sucking their mothers—that it is a very common thing to get acute inflammation of the stomach and small bowels—very often a diphtheritic appearance without any ulcers at all—that is without any of the characteristic ulcers. In old pigs I always find the characteristic ulcers. Then in other cases again we have marked brain derangement. Directly you turn the animals out into the yard they begin to stagger about as if they were drunk, no doubt due—and I made a *post-mortem* examination of some of them—to effusion into the serous membrane of the brain. Then some of them would show very few symptoms until perhaps two or three weeks afterwards, and then they began to waste, going to mere skeletons. In those I always found marked enteric lesions, destruction of a large portion of the bowels. Those, I think, are the most important points in connection with the manifestation of it. Perhaps it is quite right that I should point out that in the young pigs I have made *post-mortems* of, either just taken out of the mother's uterus, or recently born, I have frequently found discolourations of the skin, and effusion into the tissues of the body, sometimes extravasations, showing that they were affected *in utero*. I think those are the most important points in reference to its manifestations. My view is that in no given outbreak can you have a series of manifesta-

tions all of the same type, or very rarely at any rate, there are always differences.

788. Will you tell us the result of your experience in regard to the methods by which the disease is mainly spread. You have, of course, indicated already some points in regard to these particular outbreaks; perhaps you would give us your views on the general question?—In the first place, taking animals that are cohabiting together, it is spread, in my opinion, by the medium of the air from animals suffering from lung lesions, and in the second place, and more largely, through the medium of the excreta, by ingestion of the excreta. Animals for instance, as was the case at Dunragit, I pointed it out there to them particularly, stand in their own excreta, and then put their feet into the pig troughs and contaminate the food, so that every other pig connected with them has some of the contaminated food. Then it is spread by manure, and contaminated fluids of all kinds going out of the place. It is spread by slaughter-house refuse largely I think, either by getting access to the sewers or by taking away as manure stuff from our slaughter-houses and other places. It is spread by the boots and clothes of men, no matter what may be their business, about a piggery. I will point out that I have known instances where it has been spread by butchers going, for instance, out of infected places and killing pigs at other people's places. We had an example of that at Inverleith Park some time ago, where it was taken by a butcher. Then you have it spread also by castrators, and by dealers, and, as I have already pointed out, by boars, itinerant boars especially, and sows going backwards and forwards. Poultry I believe spread it, within limited areas of course, and rats I am quite sure spread it, also within limited areas. In fact all living animals there is no doubt spread it by their feet, and so on, becoming contaminated. The dead bodies of diseased pigs may also be a means of dissemination. But there is a point that perhaps is of more importance in connection with it, and that is, I believe, and I have very good reason for believing, that recovered animals, so-called convalescent recovered animals, spread the disease exactly as cattle do pleuro-pneumonia, through the breaking up of the old lung lesions and the breaking down of the lesions in the bowels, the old chronic ulcers, as they call them. Those animals I look upon as the most dangerous of all.

789. (*Mr. Carrington Smith.*) The recovered animals?—Yes, because months afterwards you will find lesions still there, as Professor Brown knows perfectly well, and Mr. Stephenson too.

790. (*Chairman.*) That would point clearly to the slaughter of those animals?—It does. Then again those animals always take a long time to recover. I have seen them for months looking more like skeletons than anything else before they seemed to pick up again.

791. What is the proportion in which the animals recover?—If they are treated medicinally, I put it down at about 50 per cent. In fact, I can say from my previous experience of it, before any slaughtering took place, about 50 per cent. recovered if they were treated medicinally. If, however, you leave them to themselves I question whether you will ever have even as high as 25 per cent. recover, I do not think you will have that, in fact, I question if 80 per cent. or 85 per cent. of deaths would not be a fairer estimate.

792. (*Mr. Wardlaw Ramsay.*) If not treated at all?—If not treated at all, if the disease was just allowed to run. If treated 50 per cent. would recover if not treated about 80 or 85 per cent. would die.

793. (*Chairman.*) That brings one to the question of the treatment and suppression of the disease. What plan do you favour most in regard to the suppression?—Might I just diverge one moment before saying anything about suppression? This has occurred to me in connection with a man named Handyside, in reference to the percentage of animals attacked. In my brief I think you will find that there were 409 killed, either diseased or healthy, and some 385, I think it is, that were left out of a certain number of piggeries, left all right, left living.

794. (*Mr. Stephenson.*) What outbreak is this that you are referring to?—That was in the Dalry outbreaks of 1885.

795. (*Sir Jacob Wilson.*) How many pigs were there altogether, 2,000?—Yes, there were 2,000 pigs.

796. Of these, how many were affected?—I have only taken a certain number of them in this way. I have only taken the piggeries where I have an absolute record of the number of pigs to commence with, and of every pig that was removed. Of course, sometimes one could not exactly get the numbers with so much to do amongst them, but I think I had 672 pigs to begin with.

797. Affected?—No.

798. Under consideration?—Yes; of those 409 were either killed, or died, or were slaughtered, in some way or another they were got rid of. Then the odd number, 263, were left on the premises, not having been attacked, or being so little attacked that we could not say anything about them.

799. (*Mr. Stephenson.*) And not in contact?—Yes, all in contact.

800. (*Sir Jacob Wilson.*) Not affected though in contact?—Not affected so far as we could judge though in contact.

801. Of the 409 that were destroyed were all known to be diseased?—No, they were not. Amongst the 409 there was a percentage of animals that were killed as I have already pointed out, because they were small pigs and we felt sure they would go. About eighty I have put down out of the 409 as being killed simply on account of their being small.

802. (*Chairman.*) Were the 409 diseased or contact pigs?—There were 409 killed, and all except about eighty and a few fat pigs were absolutely diseased. You have a note in my brief as to how many animals were slaughtered as fat, forty I think.

803. Of the 409 I see forty-five were slaughtered as fat, and healthy?—Yes, I should point out what I think is a point of great importance to you, that in one of these cases, the case of a woman of the name of Bird, there were seventy-eight pigs to begin with. Of these ten were slaughtered fat and healthy by Mrs. Bird, three only were removed as diseased, and that left sixty-five pigs in the place. The sanitary conditions were good. That is the top place of all on the plan. The sanitary conditions were in fact better than any of the others. Now at Handyside's, in Gorgie Road, in September 1885, there were about thirty-five pigs, and only one pig was removed diseased; the sanitary conditions were good there also.

804. (*Sir Jacob Wilson.*) Where was it removed to?—We killed it as diseased.

805. The rest escaped?—Every one of them; they were all in good condition and splendidly managed.

806. (*Mr. Stephenson.*) With reference to this one that you killed, was it in direct contact with the thirty-five?—Yes, it was. It was taken out of the company of them. At the Morningside Asylum in 1885, I find I have neglected to keep an absolute record, but I have been there so often that I have a fairly good notion how many pigs there would be. There would have been about seventy pigs there in May 1885. Of these seven were killed, diseased, and about ten killed fat by the superintendent himself.

807. Healthy?—Healthy. That left somewhere about fifty healthy pigs. Then I should point out still further in reference to that asylum, that in April 1886——

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808. What became of those left on?—They were sold as they became fat.

809. And remained healthy?—They remained healthy. Up to April 1886, there was no further outbreak.

810. When was this outbreak that you have been talking about?—In May, 1885; I killed all the seven pigs between the 29th and the 31st. In April 1886 a fresh outbreak took place, and we only killed five pigs.

811. How many were there to commence with then?—There would be about the same number then.

812. About 70?—About 70; that is the general average, from 65 to 70.

813. And five diseased then?—Yes.

814. No more?—No more after that.

815. No more attacked?—No. Of course we did not release them, and we do not usually release them for months afterwards if we do not feel satisfied.

816. (*Mr. Shaw.*) May I ask if these were bred in the Asylum?—Yes, that is a point I think you should note. They are all bred in the Asylum, and there is not one brought in, except one brought in for brood purposes. In reference to the method of suppression, I have pointed out to you what we did in that large outbreak, and what we have done since; but my view of the matter is that wherever swine fever makes it appearance, every animal, no matter whether diseased or healthy, as long as it has been in contact with the diseased animals should be slaughtered, because I look upon the probability of some of them recovering and becoming dangerous for months afterwards; in fact, you cannot detect them always. As I said, I would have every animal in contact slaughtered, and where I had limited areas with adjoining piggeries I would have them slaughtered too. I will give you one instance of the value of that presently.

817. You say you are in favour of the slaughter of all animals in contact?—Yes.

818. And also in the neighbourhood; would you define the distance?—I would only kill animals within, say, 100 yards perhaps of the infected place, but I would put under restrictions every animal within a quarter of a mile. Make an area; that is what we have done in that case. We have put the whole of that Dalry district under restrictions of area, now whenever disease has broken out. I would say a quarter of a mile at the very least.

819. You would not allow pigs to be moved out of that area then?—Certainly not, nor in.

820. (*Chairman.*) When you say restrictions, do you mean restrictions as to movements?—Yes, exactly.

821. You were saying that you would give us a particular instance?—The particular instance I wanted to direct your attention to was at Falkirk, within the last six months. I was asked to go there to examine some pigs in which there was a doubt as to the disease from which they were suffering. I found swine fever. These pigs were in the town in a small piggery in a man's garden, and immediately adjoining them was another small piggery, say within a few yards, with a few pigs in also. But, as in Dalry, you could see piggeries just dotted all round, perhaps with two or three, or four or five, or six pigs in each. I advised immediately that the whole of these pigs—there were only about four or five of them—should be slaughtered, and the pigs immediately adjoining them, and burn down the place; take and root it up. It was done. I saw the superintendent at Falkirk a week ago, when I was there about a case, and he informs me there has been nothing since. Those pigs, I may point out, were introduced into Falkirk from England. I think they were Berkshire pigs introduced from Bedford.

822. Now, short of the very extreme steps that you have just described and recommended, you are of opinion that a good deal can be done by less drastic means; you have a second plan?—Exactly. That second plan I have already mentioned to you as having been carried out by us at Dalry, but I would point out that that would be far more effectual if proper sanitary regulations were insisted upon. I may perhaps impress that more upon you by telling you what occurred at the Morningside Asylum, how it was we managed things better there. Immediately I advised it the superintendent had the whole of the floors taken up and laid with cement. He had the whole of the drains removed from the inside of the piggeries and put outside, and the walls washed and beautifully cleaned. Of course there were a large number of poor fellows who could do that sort of thing—plenty of hands. I attribute the fact that we had so little disease there to that fact of the sanitary conditions being so much better there than elsewhere. If all piggeries were properly constructed and kept thoroughly clean, I think you would not have nearly the trouble that you have with swine fever.

823. You would recommend in fact that there should be a great number of what may be called preventive measures as well as measures taken, as is now the case, after the disease has broken out. You wish a great deal done before?—Exactly, both preventive and suppressive measures, and the strongest point in preventive measures would of necessity be the proper sanitary construction of all piggeries and their surroundings.

824. You would have something similar to what is required under the Milkshops and Dairies Acts and regulations?—Yes, I would.

825. Something in that direction?—Yes, license them and insist upon their being properly inspected.

826. (*Sir Jacob Wilson.*) License what?—License piggeries.

827. Are you speaking now of large piggeries?—Everyone of them I would have licensed.

828. Do you include every cottager?—I would. I would allow no man to keep pigs, at least in the district where the disease existed. I do not say so much of course where the disease has never been known, but where the disease is existing I maintain that you never can be sure that you will get rid of it, unless you have absolute control of the piggeries.

829. (*Chairman.*) You are aware that I am only putting these questions in order to bring out your views. Are you aware that in many districts, certainly in the south of England, in small towns, there is an enormous number of small piggeries kept in back yards and all kinds of queer places?—Yes.

830. Do you think it would be possible to insist upon every one of these men taking out a licence?—Everything is possible. Of course it is a question of expense, but everything is possible.

831. Do you think it would be possible to get the law carried out assuming that you pass a law for it?—I would say, sweep away piggeries if they are not properly constructed, especially in the neighbourhood of dwelling-houses. I suppose it is the same elsewhere, but we do not allow a piggery within fifty yards of a dwelling-house.

832. Is that done under a bye-law of the City of Edinburgh?—Yes, I think it is.

833. I daresay you know that it has been a misfortune of many members of English Town Councils and Local Boards when they have attempted to carry out drastic legislation with regard to pig-sties, to find themselves in a minority at the next election?—Very likely, but we do not allow anything within fifty yards of a dwelling-house. You will have difficulties whatever method you adopt. You will have somebody's toes trodden upon—you are bound to do that.

834. In Scotland, is it the case that in small towns, putting aside Edinburgh, pigs are very largely kept in back yards and places of that kind, as they are in England?—They are generally kept in gardens a little

distance from the house, at the farther end of the gardens. So far as I have seen, I do not see many kept immediately behind the houses in the towns.

835. You mean, as a rule, there is a sufficient distance and a sufficient space between the houses and the piggeries ?—Yes. I know, of course, the difficulties that would arise, but, all the same, I contend that where you have dwelling-houses, or even if you have not that, for everybody's sake the piggeries should be properly constructed.

836. How would you propose to carry out regulations of this kind ; would you leave them entirely, as now, to the local authorities ?—Certainly not. If you insist upon drastic regulations of that kind being carried out, I think it is only fair, as it is done for the benefit of the community in general, that the community should pay for it all over the country.

837. You are aware that at this moment the regulations in regard to pig-sties have to be based upon the injury caused to human health—that they cause a nuisance ?—Certainly.

838. Your suggestion would be that it should be a sufficient reason for altering these kinds of things, that they are injurious to the health of the animals ?—As well as to human beings.

839. The two things, in fact, really are identical ? —Exactly.

840. The circumstances that are injurious to one are injurious to the other, and *vice versâ* ?—Yes. I should point out to you, I do not know whether it is known or whether it is a matter of importance, that up to comparatively a few years ago many of the dairies in Edinburgh, many of the byres, had pigs kept in them. That, of course, we have utterly done away with—we do not allow any such thing.

841. (*Mr. Shaw.*) I presume you mean in the City proper, not in the suburbs ?—We could not interfere outside the boundaries.

842. Does not your boundary go somewhere outside the City ?—Yes, it includes a large district. There is no byre within the boundaries of the burgh that we have not control over.

843. (*Chairman.*) I think you are of opinion that the term "swine fever" is itself misleading, and ought to be got rid of ?—I have always felt so, I have suggested that the term "swine plague" might be better ; and I include under that, not only this disease, but what is known as "swine erysipelas." There, I think, you are likely to get into trouble if you have to deal with obstreperous people. Swine erysipelas, or rouget, is really very similar in many of its manifestations to swine fever, but it would be an easy matter to a person who felt inclined to be obstructive to say, "this is not swine fever, and you cannot interfere "with it." It is quite as destructive, or at least I should say it is nearly as destructive, as swine fever, and as contagious. It does not exist to any large extent, I think, in this country, but still it does exist ; and I have no doubt that many animals have been killed as suffering from swine fever when they have not been suffering from that disease.

844. Still, the knowledge of the veterinary inspectors, I suppose, is steadily improving ?—Yes, but at the same time there are plenty of them who do not know it even now.

845. What are the commonest mistakes made by them ?—The commonest mistakes made by veterinary surgeons in connection with swine fever are, in the first place, nettle rash (urticaria), where you have hæmorrhagic spots over the body, somewhat similar to those of swine fever, simply what you might call measles—if we may be allowed to use the expression amongst pigs,—and also salt poisoning. I think there are more cases probably of salt poisoning confounded with swine fever, than of any other thing.

846. (*Sir Jacob Wilson.*) Do you mean brine poisoning ?—Yes ; but then there is not much brine used in Scotland, so we do not meet with it very often there.

847. That is the term used in the returns ?—In England I know they say brine poisoning. I think those are the things that are most largely mistaken.

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848. (*Chairman.*) Are you aware whether this brine fever is more extensively observed in what may be called the salt districts, such as Worcestershire and Cheshire ?—Certainly not. I think it is found wherever people largely use brine for pickling purposes for meat, and that it may be found anywhere. I have seen it, for instance, in Shropshire, where there is no salt at all, and in very many counties—in fact, over and over again.

849. I would just like to ask you one more question on a sanitary matter. Have you observed any improvement since the appointment of County Medical Officers of Health, under the Scotch Local Government Act, with regard to this class of questions ?—I cannot say that I have seen anything of the kind, because I have not been very much mixed up with burghs where medical officers have been appointed.

850. I am talking of counties. You are aware, of course, that the Scotch Local Government Act makes the appointment of a Medical Officer of Health compulsory ?—Yes.

851. Of course this has had but a very short time to operate. But I would ask whether you have noticed any tendency on the part of the county authorities to exert themselves in this direction ?—I have so ; both in England and Scotland I have observed that. There have been no end of communications made to me as to what we do in Edinburgh both in reference to the byres and other places. I quite think they are more active in that direction than they were.

852. (*Mr. Wardlaw Ramsay.*) In the county ?—And in the towns too.

853. (*Chairman.*) The Scotch Act, as I understand, gives the County Medical Officer of Health, I am not talking now of the sanitary inspector, power to intervene in certain cases over the heads of minor authorities ?—Yes, it does. There is one point in reference to measles that might perhaps have been misleading, and, in fact, I forgot it when speaking of skin lesions in the pig. In old sows particularly, I have noticed an eruption over the body, of small papulæ, that is, red, round, hard eruptions, I cannot say almost identical with measles, because you have practically no papulæ there, but to the naked eye of ordinary persons, very much like an outbreak of measles. That, I think, is frequently confounded with an eruptive disease that does occasionally occur in pigs, which closely resembles measles, and may lead, of course, to important mistakes. I have noticed this, that wherever the sows show that kind of eruption they nearly always recover, and very few of them die.

854. (*Sir William Kaye.*) Have you any personal experience yourself of the breeding of pigs in Ireland ? —I cannot say that I have very much direct experience there, but I frequently have specimens sent to me.

855. Have you been there yourself ?—I have been in Ireland.

856. Have you made any investigation there ?— None whatever. I have been through a large portion of the north of Ireland, and a little of the south, but I have never had anything to do with pigs there professionally.

857. Have you made any estimate as to what the cost would be, supposing it was paid by the public authorities, of re-constructing the piggeries so as to put them into a sanitary condition ?—No. There is one thing I might mention to you on that point, perhaps, in reference to the woodwork. I think that if wood itself is used, it might be rendered quite harmless by painting it with gas tar, or saturating it with creosote, and repeatedly applying one or other of these agents. If I had my way I would have everything made impervious with which the pigs came in contact, so that it can be washed ; the flooring, the

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walls up to a certain height, and all that kind of thing.

858. (*Mr. Wardlaw Ramsay.*) To what extent does swine fever exist at present in the county of Midlothian?—I have no personal knowledge, but I believe there is still swine fever existing in the neighbourhood of Gorgie.

859. I do not think you have come down to the present date in your statement?—I have not.

860. Do you think it necessary to make any reference to the outbreaks last winter at Slateford?—I was not officially connected with them so I did not mention them. Last winter we had a small outbreak in the Dalry district, a little distance from these places, marked in the map; but it was only in two piggeries, and practically it was very quickly done away with.

861. You say that pigs were bred to some extent in Dalry. Is that the case generally in the piggeries close to Edinburgh?—All that I have ever come in contact with.

862. They breed their pigs?—Yes; that is how they make their money.

863. Are pigs not imported to any extent from other districts?—Only for the purpose of improving the breed and changing the breed.

864. They are not imported as stores?—No, as a rule they sell the surplus stores in fact. They breed them mainly for the purpose of feeding them, and kill them fat.

865. There is no intercourse with other districts?—Certainly not, except indirectly, such as borrowing floats, or going to other places for food, or litter, or something of that kind. That is the only way in which I have seen it conveyed from there.

866. Have you any suggestions to make as to any improvement in legislation. For instance, I will say I have heard it asserted in Scotland that in certain districts where swine fever breaks out the owner will slaughter, on his own responsibility, the animals he believes to be diseased, and will then disperse his herd by means of a dealer?—That is a very well-known fact.

867. The dealer's usual method is to sort out the herd that he purchases, to send those that are ready to the fat market in Edinburgh or elsewhere, and to sell the rest as stores?—I can quite understand that.

868. You know that to be a fact?—I know that some dealers are capable of doing anything.

869. In your own mind; but you have no instance?—Yes; I can call to mind one or two instances where I have caught them in the market.

870. Do you believe that is done to any extent?—I cannot say that it is now; at any rate, I have no proof of it. I do not find any in the market. There are very few, in fact, coming into our market now; but I do not find any there or in the marts either, though in days gone by I used to find them.

871. Do you think it would be any protection if the slaughtering of animals by a private individual without reporting were made illegal?—Quite so. I would not allow them to slaughter animals at all in any district where there was a suspicion of swine fever.

872. (*Mr. Stephenson.*) You told us of a very large outbreak that you had charge of, and you stated that from March to the end of May you were slaughtering out a certain number of pigs; you told us that you killed the diseased and the suspected, and that you also had all the small pigs killed, I think?—Not all, but all that had been in contact—the pigs from actually diseased litters.

873. Then you had all the fat pigs slaughtered as well?—All that we could persuade them to slaughter; we did not remove them ourselves.

874. At that time had you power to slaughter all in-contact pigs under the Swine Fever Order?—Yes, we had power if we paid them compensation.

875. But you did not pay compensation?—Yes, we did; we paid compensation for every animal we had slaughtered.

876. Do you not think, if you had adopted the power that the Swine Fever Order gave you, and had stamped out this straight off the reel, say in a week or ten days' time, which might have been done, that that would have been a better procedure than taking from March to the end of May, and then only killing certain animals, and leaving a certain amount of infection and bad after-consequences?—Our reason there—at least, probably, the great reason—was that we had no power to shut up those piggeries, and we knew perfectly well that the piggeries were contaminated.

877. But it became an infected place?—Yes.

878. And that alone shuts them up?—You could not keep them shut up for ever, you know; you would be bound to let them in again after you had cleared away all the pigs and disinfected the premises.

879. Certainly not; they are closed up for 28 days, at any rate, or until such times as you are sure that they are thoroughly disinfected and safe for use again?—Our difficulty was that it was utterly impossible to thoroughly disinfect them, the construction was so bad.

880. Do you not think it was that bad that the place ought to have been closed up peremptorily?—Undoubtedly it should have been if the Local Authority had done what they would have liked to do, but then they had not the power.

881. The Local Authority in Edinburgh did not do their duty in that case?—I do not say that; I do not think they had the power to do anything more than they did. I do not think there was any question of duty about it.

882. Did they ever put the power in force which they had?—All the powers that they had, I believe, they put in force.

883. Except the slaughter of in-contact animals and paying for them?—Exactly.

884. That they did not adopt?—They did not do that generally, but, as I said, I believe that would be the plan to adopt, to kill all animals in contact with disease.

885. If you had your own way, you would rather step in and kill everything at once?—Yes; clear all away out of that place.

886. You told us that there were hundreds of cases in which there were no skin lesions?—Yes.

887. And hundreds of cases in which there were skin lesions?—Yes, and very little internal lesions.

888. You also told us that in old pigs there might be brain derangement?—I did not say in old pigs, I said in young pigs. I have seldom seen much brain derangement in old pigs. It is mostly in pigs two or three months old that I have seen brain derangement.

889. Is it possible to have a case of swine fever in which the only *post-mortem* lesions which can be found are those of muco-enteritis, with no lung lesion, and no lesion of the ilio-caecal valve?—Yes.

890. Without any of the ordinary swine fever lesion?—Yes, especially in young pigs sucking their mothers.

891. You find muco-enteritis lesions?—Yes, muco-gastro-enteritis.

892. Have you always found the lung lesions present as well as the bowel lesions?—Certainly not.

893. In some cases you will find lung lesions?—Yes.

894. And in others bowel lesions?—Yes.

895. Will you tell me the condition of the lung within the lung lesions?—In early stages the lung is congested in patches; usually there is effusion into the interlobular tissue of pale red serum, different altogether to that which you get for instance in pleuro-pneumonia. Then you get broncho-pneumonic lesion, involving, perhaps, a tract of the lower part,

generally speaking, of the lung; that goes on to consolidation, and ultimately it may become encapsuled, much the same as in pleuro-pneumonia.

896. And you will get adhesions?—Yes.

897. In what state do you sometimes find the pericardium; what are the contents of the pericardium?—In reference to the pericardium I have seldom found anything more than effusion in it.

898. Now, the mesenteric glands?—I will not say always, but in the large bulk of cases the mesenteric glands and lymphatics are either congested or inflamed or hæmorrhagic.

899. I may take it for granted that you also get effusion into the peritoneal sac?—Yes, largely.

900. Tell me what is the difference between swine fever *post-mortem* lesions and swine erysipelas?—In many cases there is very little difference.

901. How would you distinguish them?—It would be very difficult in some cases for any person to distinguish them unless they were to use the microscope.

902. In swine erysipelas are there bowel lesions, is there ulceration of the ilio-caecal valve?—No, not absolute ulceration, so far as I have seen.

903. Certainly not?—No.

904. Then in that it differs from swine fever?—In that it differs largely.

905. Are the lungs consolidated; is there any lobular consolidation of the lung?—Not so marked as in the other.

906. Then is not the heart very differently affected in swine erysipelas to what it is in swine fever?—Quite; in some cases, not in all, though. We had some cases in which there was very little heart lesion; in other cases you get endocarditis.

907. In what you call endocarditis, which is now called swine erysipelas, is it not a fact that you get sloughing of the skin of the extremities, the tail, and the ears, and patches on the back?—So you will in swine fever. You may get it in either of them, they are both blood lesions and consequently you will get sloughing.

908. You may have sloughing in swine fever?—I have seen large patches in swine fever.

909. The number of animals that have recovered, or at any rate those which have been in contact and not affected in Scotland, is quite different from my experience in the north of England?—That may be so, but the statistics given are absolutely correct, and are only a tithe of similar instances that have come under my notice.

910. That may be because we do not give them the chance to live, because we stamp out, and we are done with it at once?—I quite agree with you if it can be done.

911. Our statistics are very different from yours. I take it for granted that in every one of these wonderful statistics as to the deaths, and those that are left—for instance there were 53 left in a healthy condition out of a lot of 70—you saw the *post-mortem* of the seven diseased ones?—Yes.

912. And there was no mistake that it was swine fever?—No, for I made the *post-mortem* examinations myself, but as I told you they were taken out early; they were not allowed to linger on amongst the others; they were taken out immediately it was noticed and the proper sanitary regulations insisted on.

913. Do you tell the Committee that if all piggeries were well built and kept clean there would be very little swine fever?—I would say this perhaps more correctly—that swine fever would be more easily got rid of, and would not linger about the place.

914. I take it that we could not have swine fever unless we have the virus introduced into the system?—That is understood.

915. Now, as to the question of dirt?—Dirt is only secondary; of course you cannot have a disease without its germ.

916. Do you think that swine erysipelas is as contagious and as fatal as swine fever?—I do not think from the little I have seen of it that it is quite as fatal, but I do believe it is nearly as contagious.

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917. That is not my experience, but is it not a fact that for many years endocarditis in the pig has been recognised?—Yes, no doubt about that.

918. Would you separate endocarditis, as we know it, from swine erysipelas?—Certainly, if there was no evidence of contagiosity about it. You can have endocarditis in any animal quite independently of contagion.

919. How would you be positive that it was not a case of endocarditis, but was a case of swine erysipelas?—If I get the skin lesions, or any skin lesions, and a number of animals affected with endocarditis, then I should most positively say that is not an ordinary case.

920. If you had a pig with endocarditis, with large growths upon all the valves, you would naturally get an obstructed circulation; that is so, is it not?—Yes.

921. And that would lead to congestion and sloughing of the skin of the extremities?—Yes; I grant that.

922. Therefore you get the skin affected with endocarditis?—Yes, but you do not get the diffuse discolouration that you do in rouget, with endocarditis, in ordinary cases.

923. In speaking of the cases that might be mistaken by a veterinary surgeon you spoke of nettle rash?—Yes.

924. I agree with you there; measles I have no experience of; brine poisoning I know—I think it is a very common cause?—Yes.

925. Now, what is your experience as to worms; do you find them sometimes in pigs; does it come under your notice often that pigs are suffering from worms?—Yes.

926. In your opinion what are the symptoms?—Do you mean in the bowels or in the lungs?

927. In bowels, stomach, and lungs?—I have never seen many in the stomach. Worms in the lungs, that is strongyles, give rise to a cough very similar to the cough in swine fever, and give rise also to bronchitis of course. I know that many a pig with strongyles in its bronchial tubes has been killed as suffering from swine fever without a proper examination being made. In the bowels ascarides are practically the only worms I have come across, and I have never seen any reason to think anything about them in connection with swine fever.

928. Have you met many cases of tuberculosis in pigs?—Dozens.

929. Were the symptoms there analogous to those of swine fever?—Certainly not, except emaciation and anæmic condition.

930. Obstructed bowels?—Yes, sometimes.

931. Do not you find that you get skin affection there?—No, and very rarely pulmonary congestion; you occasionally get blueness of the skin.

932. With obstruction of the bowels?—Yes, but I cannot say that there is much discolouration.

933. With muco-enteritis due to indigestion, or to any irregularity in the food, will you not get discoloured skin?—Yes, but it passes off again as the disease passes off; it leaves no lesions.

934. (*Mr. Carrington Smith.*) You said, I understand, that you do not advise the local authorities to slaughter at the local expense?—If it could be possibly made an Imperial question I think it would be far more satisfactory, and far more likely to bring the matter to an end.

935. You do not as a practice advise the local authority to slaughter?—Yes, most positively I do, if they cannot get any other method of slaughter.

936. In your evidence you have shown cases where you have given advice to the contrary—"Adopt "sanitary measures and not slaughter"?—We

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slaughtered all diseased animals or suspected animals and paid for them.

937. But not in contact?—No. I may say this: we have slaughtered all in contact where they have been few in number, and the piggery has been isolated. We have done that, but not in a place like Dalry, where you have got so many of them about.

938. But you strongly advocate that slaughter should be universal of all pigs, diseased and in contact, if the expense were placed upon a central authority?—Yes, I do; in any case I say that would be the better plan. I do not care who pays for it if it could be insisted upon. Of course I am only saying the central authority, because I think after all, the same as in other diseases, it should be done by the central authority.

939. Have you any theory in your own mind with respect to the diagnosis in case the Imperial authority took upon itself the management of the affair? Would you leave the diagnosis in the hands of the local veterinary?—Certainly not. I would do exactly what has been done in pleuro-pneumonia.

940. Send up the organs?—Yes, or have them examined through the medium of some other authority better qualified to deal with them than some veterinary surgeons are who have not had any experience of the disease.

941. What organs would you send up, supposing you take, we will say, the central authority, to the Royal Veterinary College in London?—The bowels, and the lungs, and the skin, if there is any lesion in it, and all the lymphatic glands connected with the bowels and lungs.

942. Would there be any risk of infection in the transit of these infected parts?—The risk would be very slight indeed.

943. Greater of course than in pleuro-pneumonia?—Yes. Of course if it was properly packed there could be no risk of infection.

944. Would you recommend that the distinction between erysipelas and swine fever should be done away with, or rather that erysipelas should be included in the Act?—Yes; make it swine plague if you like, and then the term would include swine fever, and swine erysipelas, and there would be no question then; no disputes could arise.

945. In the beginning of your evidence you said that at Lawson's Nursery—I think I took down that name?—Yes.

946. There were some cases?—Yes.

947. But that without any difficulty you were able to get rid of it there?—Yes.

948. What specially good conditions were there at that nursery?—It was in the open country in the first place; the sanitary conditions were fairly good, everything was done that I wished, and I administered to all the animals what I looked upon as preventive medicines, which I considered had perhaps some little influence in checking the disease.

949. Have they cement floors there?—Not at that time.

950. What kind of floors had they then?—As far as I recollect the floors were ordinary paved floors.

951. Brick?—No, stone, but the pigs were well cared for and clean.

952. Do you think as a matter of fact that paved floors are safe from a contagious point of view?—Providing they are impervious, not otherwise.

953. Surely the earth between the pavement, unless the pavement is set in cement, must retain the infection?—I would grout it with cement, or with asphalte.

954. Between the stones?—Certainly.

955. You practically make it an impervious floor?—Yes.

956. And one which was unable, if washed out properly, to contain any contagion?—Yes,

957. You would use disinfectants, I suppose?—Yes.

958. You mentioned that at Dalry there were a hundred pigs in one lot. May I ask whether those pigs were all in one sty or were they broken into small lots, speaking from recollection?—I did say that there have been as many as a hundred pigs in one place.

959. Do you mean in one sty or all together?—No, in one premises; at one piggery.

960. Broken into sties?—Yes; but the horrible thing there was that they had small sheds with pens on either side and a gangway in the centre. You walked along the gangway, you put your foot perhaps on a board, and up came a mass of filth into your face. A more horrible condition of things could not possibly be conceived. That we have of course altered as far as we could.

961. Is there any difference between swine erysipelas and rouget?—None, they are the same disease.

962. Would you kindly tell me, of course I am not an expert, as near as you can what difference in appearance the skin presents in the case of erysipelas and in the case of swine fever?—I must tell you in the first place that my experience of rouget has not been a very large one—in fact, no veterinary surgeon in this country so far as I know has had a very large experience of it. The lesions are very similar as far as general appearance is concerned. There is a peculiar redness going on after a time—a dark red and even purple appearance.

963. Is that red diffused, or is it defined, in patches?—Rather more defined than in swine fever perhaps, but in the cases that I have seen it was so much like it that really any ordinary person might very well mistake it for swine fever, in fact, I could not myself undertake to differentiate between the two in all cases.

964. (*Mr. Shaw.*) Have you a disease which we call in Ireland diamonds, which is taken, I suppose, from the ace of diamonds on a card, and the eruption forms rather a diamond shape on a body as big as half-a-crown?—Not exactly that shape, but I think you are referring to nettle rash or urticaria.

965. How long does that last?—A few days.

966. Instead of a diffused colour it appears in small patches?—Yes, that is the nettle rash, and they do not die with it.

967. That is not a fatal disease?—No.

968. As a matter of fact is it infectious?—No, certainly not, it is a purely local disease as far as I have ever seen it, due to improper dieting.

969. You mentioned about surplus material, and of its being carried away, I think?—Yes.

970. Was that the cleanings of the pig troughs?—No.

971. I am speaking of Dalry now?—The Dalry people do not send food out, but they get food.

972. From the hotels and restaurants?—Yes; and from the Morningside Asylum.

973. I thought you said the surplus food was sent out?—That was from Morningside Asylum to the Dalry piggeries. At the Morningside Asylum they have an enormous quantity of stuff out of the Asylum—more than they want sometimes, and they were in the habit of selling it to these men at Dalry. I am quite certain that one man who had the disease in his place carried the disease to the Morningside Asylum through the medium of his cart, or his horse, or his feet, when going for it. Then I must tell you that they got a second attack due, I believe, to their lending their float to a person to convey his diseased pigs in.

974. The disease can be carried by a wooden cart then?—It can be carried by anything in the shape of a pervious material.

975. Do you think there would be any advantage in the registration of boar keepers, and in putting their places under inspection?—Most positively, of all

things boars, especially itinerant boars, ought to be registered.

976. By itinerant boars, do you mean the boars that travel about the country for service?—Quite so.

977. And are driven from place to place?—Yes. I have never seen it anywhere else except in Fife, but I suppose it is carried on pretty largely.

978. Have you any experience of particular breeds of pigs in certain districts, whether they are closely bred in certain districts?—I quite know that.

979. Is it a fact that in districts which we in Ireland call congested districts, where a number of poor people live, the same breed of pigs are perpetuated for a long time, and would that be more calculated in the case of swine fever getting into that district of inducing a greater death rate?—Certainly, if they were to breed in and in to any extent.

980. The strain would be weaker, and therefore less enabled to repel an attack?—Yes.

981. In your experience in what particular time of the year are we more liable to have swine fever than at any other time?—The time of the year has absolutely nothing whatever to do with it; if there is infection in winter you will get it then, if there is infection in summer you will get it in summer.

982. Do you think that it spreads as easily in winter as in summer?—Certainly not; it spreads more in summer.

983. In any particular kind of weather?—No, except dirty weather.

984. You mean heavy, dirty weather?—Yes.

985. Thundery kind of weather?—Yes, and murky.

986. And changeable weather?—And changeable weather; that only holds good of course in an indirect manner.

987. In your experience what stamp of animals, I mean as regards condition, most readily take disease?—The poor-conditioned animals.

988. They take it?—Yes, I think so, that is my experience.

989. The experience of one of the best authorities in Ireland, of course it is a purely local one, is that it is generally the best-conditioned animals that take this disease?—That has not been my experience at all. I have often seen good, healthy, fat pigs resist it, and the sows, which I may say in most cases are kept in very good condition, prove what I say. The bulk of the sows that I have seen die, and they have not been very many, have been sows that have just come off nursing, and are reduced to skeletons almost.

990. They are run down after the litter?—Yes.

991. If these pigs suffering from swine fever recover do they do much good afterwards?—Some of them, but many not.

992. They take a long time to recover?—Yes, they do, and when they do many of them seem to linger on and to do very little good.

993. I presume in addition to prevention you approve of disinfection?—Yes, thoroughly.

994. The cost of which should be provided by the State?—Either by the State or by the local authority. I think the local authorities might very well take disinfection in their own hands.

995. In the matter of the destruction of sties, you told us that you burnt down a sty or two?—Yes, but only small places.

996. Were they compensated for that destruction?—Yes, they were, the Falkirk authorities paid them.

997. Then we ought to pay compensation in the case of destroying sties?—They paid. They asked me what I thought should be done; I told them; they said, "Very well, we will burn them down and "pay for them."

998. You think if the sties are wooden and of such a nature that they carry the infection, it is absolutely necessary to destroy those sties?—I do not see what else you can do with them unless you paint them all over with gas-tar. That is the most effectual method I have used in dealing with it.

999. Do you think the painting over of wooden floors with gas-tar or saturating them with creosote would be effective?—I am quite certain it would if properly done, and the foundation made of gas-lime or gas-ash.

1000. And would kill it out?—Yes; I do not think anything stands gas-tar, especially if put on hot; wash them first, of course.

1001. How long do you think the vital power of the germ lasts?—My own view is that it may last for some months in dirt.

1002. In special conditions?—In dry dirt and in filth. That is the conclusion I have arrived at from what I have seen; I may be wrong, of course, it may have been in some other way, but I have arrived at that conclusion.

1003. I think you said that if possible you would not allow the owners to kill their own diseased pigs?—Certainly.

1004. Who would you have do it?—I would take them straight away to the slaughter-house.

1005. To a public slaughter-house?—Certainly. There ought to be a public slaughter-house everywhere. Take them straight away. I have taken as many as forty away from Dalry in one afternoon.

1006. Is there not some risk in carrying away infected animals to a public slaughter-house?—Certainly not. We put them in a well-limed float, take them straight away, disinfect the entrails, and destroy them in fact.

1007. Suppose the pigs are forty miles from a railway station, as they are very often in Ireland, and in Scotland too, what would you do?—If there is no slaughter-house, bury them in quick-lime. That is what I advised at Dunragit, and it was carried out there.

1008. What would become of the carcases when they got into a public slaughter-house?—We boil them all down and sell the fat.

1009. It does not go into margarine, I hope?—Possibly. We sell the fat afterwards; of course, we do not inquire where it goes.

1010. (*Sir Jacob Wilson.*) I observe you recommend that the disease known as erysipelas should be included along with swine fever under the term swine plague?—Yes, or included as swine fever if you like.

1011. That is what you said?—Yes, I did say that.

1012. I presume your motive in recommending that is in some degree due to the difficulty of discriminating between the two?—Exactly; that is to any ordinary person, and it is so difficult to ourselves sometimes that we cannot positively say in all cases.

1013. I take it then, that, from external symptoms alone, to the majority of veterinary inspectors who are not great experts, there is a difficulty in at once deciding whether it is swine fever or not?—Yes, exactly, in many cases.

1014. I observe, further, that you have said that your experience is that where treatment is adopted, about 50 per cent. of those pigs recover?—Yes.

1015. Might not some of those be cases of erysipelas instead of swine fever?—Quite possibly, but I am speaking now of where we have actually proved that it was swine fever.

1016. By a *post-mortem* examination?—By *post-mortem* examination.

1017. Would you be disposed to say that an opinion expressed that not more than 10 per cent. ever recover is incorrect?—I could not say that, because it would depend on local circumstances and conditions. I have put it to you that only 15 per cent. recover if they are not treated.

1018. Now, I want to come to this question of treatment, which is somewhat novel to the committee; can you tell us what is the form of treatment

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you recommend?—The administration of such agents as hypo-sulphite of soda, salicylic acid, rather expensive perhaps, chlorate of potash, sulphate of iron, which is of course very cheap, and any similar agent that a person may think it wise to give. Salicylic acid, or salicylate of soda, I look upon as one of the best, and ammonia—I used to give large quantities of ammonia.

1019. I take it, then, that you would not attempt any treatment unless you knew that it had been proved by *post-mortem* that swine fever really existed?—Exactly, of course I am dealing with swine fever; we might be treating some disease quite independent of it.

1020. When you are called in for your advice in the case of an outbreak are you careful to ascertain the history of the circumstances as well as to observe the external appearance of the pigs?—Yes, but in all our outbreaks in the neighbourhood of Edinburgh, as I have told you before, it is a very difficult matter to trace the exact origin of the disease, because we know as a matter of fact that there is very little importation. Every now and again they will introduce a boar from some other place, and there are only two or three small dealers amongst the whole lot.

1021. You are speaking of importation as from one part of the kingdom into another part of the kingdom?—Yes.

1022. As a matter of fact, within your knowledge have many cases of diseased pigs come into Leith, or into any other port of Scotland from foreign countries?—There has been no pig landed in Leith except a few surplus stores since I have been there.

1023. From foreign countries?—From foreign countries; just a few surplus stores, that is all.

1024. You do not know anything about the importation of Irish pigs into Glasgow, perhaps?—I do not. I know, of course, that it is carried on.

1025. You recommend the slaughter of all diseased animals, and of all suspected animals?—Yes.

1026. Would you not suspect any animal that was in contact?—No, I see large numbers that never take it at all. If I get a litter of young pigs, say about ten or twelve pigs, and it breaks out amongst them, I take the temperatures of them; if I get any with high temperatures or showing any peculiar signs about their eyes, which is very often the case, a little bloody mucous round the eyes, or brain derangement, I take them away at once.

1027. At what temperature do you arrive at the slaughter stage?—103 or 104. I do not usually take the temperature alone; I just take the general aspect, with the temperature.

1028. Do you regard public markets and auction marts as a source of disease?—Yes, there is no doubt it is spread through them.

1029. You have gone so far as to recommend that all owners of pigs ought to be licensed?—Yes.

1030. Would you also extend that requirement to dealers in pigs?—That, of course, may be a secondary question, because if the owners were licensed you, would have, I think, a sufficient hold upon them not to care anything about dealers.

1031. Then it does not in your mind appear that the dealer should be the man in whom a greater necessity arises for licensing than the owner?—I often think that if the owners were put under such restrictions that they could not sell diseased animals the dealer himself could not get hold of them.

1032. Is not the dealer more likely to mix a number of animals together?—There is no question about it.

1033. From which it is likely disease may spread?—We may take a parallel instance in connection with the licensing of dairies. We do not allow a dealer to have cows for sale purposes even in any byre which is not licensed.

1034. Do you believe there is a great amount of fraudulent concealment of swine fever?—Yes, I believe there has been a vast amount of that in the past, a vast amount of it.

1035. Do you think that that might be in some degree met by increasing the amount of compensation?—I think so; I think that if the people are compensated for diseased animals they are more likely to report than if you do not compensate them.

1036. You are aware of the amount permitted at the present time by law?—Yes, I am.

1037. In your opinion is that ample?—Ordinarily I think it is, but where you are dealing with well-bred animals I think not, especially with sows; sows I take to be the most valuable.

1038. Would you be disposed to increase that to any great extent?—Perhaps about 2*l.* per head.

1039. £2 more?—Yes.

1040. From 4*l.* to 6*l.* for in-contact animals; and what for the diseased animal?—Where the man reports I do not think you could make for any diseased animals quite so much reduction as a half; it is half now; it should be about three-fourths, as was done in pleuro.

1041. What would be the compensation which you would recommend for a case of slaughter of a diseased animal?—Three-fourths if a man reports.

1042. Of a diseased animal?—Yes.

1043. And for those in contact, how much?—Full value, unless you like to fix a limit, say up to 6*l.*

1044. You are aware there is a limit already?—Yes, there is one already of 4*l.*

1045. And you would extend the limit to 6*l.*?—Yes, because I know there are some sows well worth that or more. It would be the man with good breeding sows who would be the least likely to report if he did not get his full pay.

1046. (*Chairman.*) As I understand it, your view is that the difficulties of attacking the dealers are so great that the preventive measures ought if possible to be directed against the pigs before they have left the owners' hands to reach the dealers?—That is my view; at the same I would not let the dealers go scot free, because I know that some of them are capable of doing anything.

1047. I think you consider the practical difficulties are much greater in dealing with the dealers, as they are always moving about, than with the owners?—Yes.

1048. Therefore putting aside the moral aspect of the question, and bearing in mind only the practical one, you look to remedies directed at the diseased animal on the spot before it has passed into the dealers' hands?—That is exactly my view, as it was in pleuro-pneumonia, deal with the people who have to deal with the animals themselves direct.

1049. (*Professor Brown.*) You in your experience find, I think you said, that 50 per cent. of the animals recover when they are treated?—I said 50 per cent. if treated. Perhaps I was not quite as clear there as I might have been. I might have put it in a different way.

1050. Have you opportunities of observing what recoveries there are when there is no treatment?—Yes; I say when there is no treatment there would be only about 15 to 20 per cent. of recoveries, and from 75 to 85 per cent. of deaths.

1051. Then with regard to the spreading of the disease I find that you get one pig diseased out of seventy-five, I think you said?—No; one pig out of about thirty or thirty-five—that was Handyside's; the other case was three pigs out of seventy-five.

1052. The rest of them entirely escaped?—Exactly, and they were carefully watched twice a week.

1053. You are aware of course that that is quite contrary to our experience?—I am quite well aware of it, and I gave you that with others as an exceptional case.

1054. Then I understand that it is not your usual experience?—No.

1055. They are merely exceptional cases?—That is an exceptional case. It was the top piggery shown on that plan.

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1056. Then the important question which I want to put to you is this, I gather from what you have said at different times that you meet with cases of swine fever without any skin lesions ?—Yes.

1057. That you meet with them without any lung lesions ?—Yes.

1058. That you met with cases in which there were lung lesions, and no bowel lesions ?—No typical bowel lesions ; perhaps a little inflammation or congestion of the bowels.

1059. Nothing out of the common way ?—No ulcers.

1060. Without characteristic bowel lesions ?—Yes, that is so.

1061. You meet with the disease without any lung lesions, and with the characteristic bowel lesions ?—Yes.

1062. You meet with the disease with both together ?—Yes.

1063. You meet with it with only a slight inflammation of the stomach in young pigs ?—No, inflammation of the stomach and bowels.

1064. Inflammation of the stomach and bowels ?—Muco-gastro enteritis of the small bowel, I think I did say there, not the large bowel.

1065. (*Mr. Stephenson.*) I think you said in small pigs ?—In sucking pigs more particularly.

1066. (*Professor Brown.*) And you met with cases in which there are only brain lesions, I think you said ?—No, I think not ; I think my statement is that only brain symptoms are shown during life, complicated probably with some other lesion internally after death.

1067. Under those circumstances I want to ask your opinion as to how the veterinary inspector is to know whether he has a case of swine fever or a case of some other disease ?—Perhaps I have been a little too absolute in that answer. You will understand that I have never met with an outbreak, say among twenty or thirty pigs in one place, where there have not been some of them showing definite lesions. When I made use of that expression of hundreds I did not mean that to apply to any one given outbreak. I applied it to all the outbreaks that I have ever seen.

1068. Then what you mean is, that these extraordinary cases have come under your observation in the course of outbreaks in which the characteristic lesions of swine fever were developed ?—Yes, always so.

1069. That is what you mean ?—Decidedly, I never meant otherwise.

1070. Then it comes to this, if in any one case of a pig suspected of swine fever you find these exceptional conditions, or rather observe that there is an entire absence of the characteristic lesions, would you call that swine fever ?—Certainly not, I would if I found characteristic lesions.

1071. Only one pig : a thing may happen to you which happens to me continually, that the carcase of a pig is sent up to be examined ; if you find that there is simply gastro-enteritis, would you call that swine fever ?—Certainly not, I would not commit myself so far.

1072. If you find lung lesions without the bowel lesions, would you call that swine fever ?—Certainly not, not in one case.

1073. If you find bowel lesions, but no lung lesions, would you ?—Certainly, if the bowel lesions were characteristic.

1074. It comes back to the original state of things, that, in order to define swine fever and to make your diagnosis absolute, you would still insist upon having the characteristic bowel lesions ?—I should only look upon them in one case ——

1075. I say for any one particular case ?—For any one particular case, certainly.

1076. And, in the absence of those characteristic bowel lesions, you would not certify ?—I would not commit myself to saying that it was swine fever. If I had lung lesions, with lymphatic conditions, I would say that, certainly, in my mind is swine fever ; but I would not officially declare it so. I consider that you have no lesion absolutely definite except the bowel lesion.

1077. Then you say that you have no doubt many cases of swine erysipelas or rouget are killed for swine fever ?—I do not say many cases, because, as I say, my experience of rouget is limited. I should consider that some are so killed, and, of course, so far as that goes, I do not see that any harm is done.

1078. Do you think it is a matter of any consequence if it happens very frequently ?—No, not at all, because you just as much require to deal with it as you do with the ordinary swine fever.

1079. Then there is no particular necessity for including the term rouget, or swine erysipelas, within the term swine fever ?—There is no particular necessity so far as the actual dealing with the disease is concerned, but I foresee and do see that you might have no end of disputes arise, as has been done in connection with another disease, by some other person being called in. For instance, if I condemned it as swine fever, another person would come in and say this is rouget, and that is not included in the Act.

1080. It is very easy, is it not, to distinguish by the morbid appearances and by microscopic section between rouget and swine fever ?—I have seen cases where I would not pretend to say it was not swine fever, but by the microscope, of course, if you get the organism, you are satisfied at once. But there comes in the difficulty ; veterinary surgeons in the country, of course, numbers of them, would not be able to do that.

1081. If, as is probably the case, some further investigation which is going on will prove that this disease of swine erysipelas, with the characteristic disease of the heart, and the organism of swine erysipelas in it, should lead to the conclusion that the disease is not uncommon in this country, would you think it very desirable that it should be named along with swine fever or swine plague ?—Yes, I do decidedly. I would just say, with reference to the bulk of the cases of rouget that I have seen, they have been sent to the college to Professor MacFaddyean ; some of them I have had sent to myself, but the bulk of them have been sent to him. I know, in fact—he showed it to me one day—that he has recognised the organisms in them.

1082. Has it come under your notice at all that the peculiar condition of the valves of the heart with so-called cauliflower growths is an old matter ?—Yes, I have been acquainted with cauliflower, or with vegetating endo-carditis, for a very long time in pigs and in other animals.

1083. Do you happen to remember that Hewitt in his book on the pig, which, I think, was published about 1835, mentions the circumstance of that valvular disease of the heart of the pig being very common ? —He may have done so, but I do not know that I have read it, but we may, of course, have a vegetating growth there without anything to do with rouget at all. I have a coloured sketch of the heart of the pig, which I have had for several years, which is identical with the more recent cases that I have seen.

1084. (*Mr. Wardlaw Ramsay.*) You have told us of the conditions as to pig-keeping in the neighbourhood of Edinburgh ; have you any knowledge of the conditions in the neighbourhood of Glasgow ? —Very little.

1085. Then you could not compare the one with the other ?—No, I would not pretend to say anything about it, for I have no practical experience.

1086. (*Chairman.*) With reference to that outbreak that you spoke of near Stranraer, was there any idea that it came from Ireland ?—There is always a suspicion there of that. There have been a number of Irish pigs brought from Ireland into that district, and that was the suspicion entertained at the time.

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1087. (*Sir William Kaye.*) You do not give it as your evidence that it did come from Ireland?—No, I merely say that the remark was made at the time.

1088. (*Chairman.*) It is a probable observation to be made, because there are enormous numbers of animals coming across to Stranraer from Ireland?—Numbers at that time were coming across; I do not know whether it is the same now.

1089. Boats were especially built for bringing over animals of all kinds?—Yes.

1090. (*Sir William Kaye.*) Are you aware that they are all inspected by highly-qualified medical inspectors before they are put on board?—They might inspect for swine fever, and they would not detect it in some cases.

[The Witness withdrew.

Mr. NATHANIEL BENJAFIELD, called in; and Examined.

Mr. Nathaniel Benjafield.

1091. (*Chairman.*) I think you live on the borders of Dorsetshire, at Motcombe, near Gillingham?—Yes; just between Gillingham and Shaftesbury, two miles from Wiltshire.

1092. You have been in the past a very great breeder of swine?—Yes.

1093. And you still continue to be so?—Yes.

1094. It is naturally important for the Committee to make it clear that we are examining witnesses with a large experience, would you tell us, therefore, briefly, the extent and character of your business, so as to get it on our notes?—Until last August, when I had a large sale and sold nearly the whole of my herd, I used to keep about 200 at a time. In future I shall only keep a comparatively small herd, because I am giving up summer showing and local shows; I am only going to show at Smithfield and Birmingham.

1095. What amount of breeding stock do you have on your establishment?—I have kept about 20 breeding sows as a rule; always about that. I have sold a great many breeders, and have always been selling.

1096. You have a very great experience, therefore, of sales in that part of England?—Yes.

1097. Will you tell us where the largest sales are in that district?—I suppose the largest would be at Wimborne.

1098. There are large sales held at Gillingham itself?—Quite a large sale; but Wimborne is the largest I imagine.

1099. And Handley also?—The county boundary regulations affect the sale there, and spoil it entirely, because they are close on the borders of Wiltshire.

1100. Would you tell us a little of the past history of the regulations of the county?—Dorset was closed against all counties on the 1st of October 1887, and it has never been opened since.

1101. Would you just give us a little detail on that?—The regulation prevented the movement of swine into the county of Dorset from any other local authority in England or Scotland, from the 1st October 1887, except for immediate slaughter.

1102. Are you speaking now of swine alone?—Of swine entirely. The only exceptions were pigs moved into the county for slaughter, in which case they were painted or stamped with the letter "M," about six inches long, on the left side, and the pig had to be killed within four days I believe. They had to go to the slaughter house.

1103. What neighbouring counties have got regulations against you?—Somerset has regulations against us, but we can send into Wiltshire and Hampshire without any regulations at all. There is no licence needed at all into these counties. In my village there is a farm in the two counties of Wilts and Dorset, and I often wish that was mine; the front yard is in the two counties. The Clerk of the Peace for Wiltshire suggested I should take that farm once. In 1888 I believe Northumberland was the county I suggested they should copy. Whether it was Durham or Northumberland that they copied I have forgotten; they had a regulation in their county for the admission of swine for special breeding purposes. I found our people were not at all willing to relax the regulations; I said it is impossible; we breeders must have new blood, so I sent a Northumberland form, of which this is a copy exactly. (*Producing notice.*) This is a Dorset regulation. On the 3rd January 1888, at my suggestion, they allowed pigs to come in for special breeding purposes, by a licence issued by the Clerk of the Peace himself; and that is the form.

1104. What has been the result of this severe restriction; have you had outbreaks since?—Yes; just as much as the neighbouring county of Wilts, quite as much I am perfectly certain.

1105. What do you attribute that to?—I attribute a good deal of the supposed swine fever, as I reckon some of it is, to bad feeding, and injudicious feeding, As a matter of fact I was getting on some pigs for the Royal Show at Windsor, and I gave them some separated milk. I believe, if they had been examined by almost anybody, they would have been supposed to have been suffering from swine fever, and they were entirely spoilt by the separated milk supply, If they had had some linseed meal in it they might have done better; but I had to kill them to save them from dying. Mr. Prideaux, a neighbour of mine, who breeds and feeds a great many pigs, is a large milk purveyor. Of course they have some thousands of gallons of separated milk to consume or do something with, and last summer he had extreme difficulty in keeping his pigs from going wrong owing to their consuming separated milk. It produces similar symptoms to swine fever; very similar.

1106. What is your theory of the origin of the disease?—My idea is that that disease is not swine fever, but I think it is often called swine fever; that is just my idea, It is a contagious disease; it comes to you if you do not stop it.

1107. Let us go back to the question which I asked just now: since the severe restriction orders have you had outbreaks of what you would consider genuine swine fever?—What they have considered genuine swine fever, but I am not so certain about it in my own opinion; the authorities in our county have declared it genuine swine fever, and have paid compensation.

1108. What brings me to the next point, what is the practice in your county about slaughter and compensation?—They generally slaughter all that are affected and some that are not, and have those that are slaughtered and not affected sent to market, and compensate for the whole. I am rather an advocate for no compensation; no swine fever then, I think, probably.

1109. You say you are an advocate of no compensation?—Yes, I am most thoroughly.

1110. Do you consider that compensation has a tendency to make people careless?—I most certainly think so.

1111. That is what you consider is your experience?—Yes.

1112. Now Dorsetshire, of course, is at no distance from the New Forest?—It is not far.

1113. Can you tell us anything about the New Forest as a source of swine fever?—I know they are very guarded in Dorset against that part of the country, but I do not live in that neighbourhood at all, I know they are very particular about swine coming from

Hampshire to Dorset, and I imagine that is the reason.

1114. You are aware that large herds get together in the Forest?—Yes, that is the point. The loss we have suffered through the closing of the county has been very much more than the gain—unfortunately so. Only this last week I know of a farmer who has some large store pigs within three miles of my village, and he has them advertised for sale, and four or five people immediately near me would buy them if they could have the chance, but they cannot get them into the county at any price. It has been like that for six years.

1115. Where are those pigs?—At Mere, in Wiltshire; they are splendid pigs. As a matter of fact, under the regulations that we have at present, we can get things in from agricultural shows that have been exhibited by ourselves, but now there is an annual sale on the 16th March, at Bingley Hall, of pedigree, large white, and Berkshire and Tamworth pigs, but I could never attend that sale if I wanted to buy a young boar ever so much, and there is bound to be no risk, because no one would think of sending a pedigree animal for sale that was suffering from any kind of disease. It is impossible to go and buy a diseased one.

1116. Have you ever noticed that first-rate animals in pedigree herds are more free from disease than the ordinary animals?—Yes, inasmuch as they are looked after better. As a matter of fact, I think a pure-bred animal neglected is probably more liable to disease than a cross-bred, hard-bred animal. I think all here probably would bear me out that a well-bred horse or a well-bred cow would get a disease quickly. Any well-bred animal, it seems to me, is quite as liable, if not more so, to take a disease. But then, of course, well-bred herds are generally well looked after. I fancy dirt and neglect produces this disease as much as anything.

1117. Do you think it produces it or only encourages it?—It encourages it and sometimes produces it too, I really think.

1118. You are aware that is not the general opinion?—Quite so, but I have seen cases of the disease; I know the authorities are very much more up in their knowledge of swine fever than they were seven or eight years ago, but I have seen some most terrible things, cases where the pigs have been ill, and supposed to be suffering from swine fever, and they have had nothing more like swine fever than I have had myself. I have seen that and known it. I knew one special case in our neighbourhood once, when it was really nothing but starvation that the pigs were suffering from. I do not think that would obtain now. I believe they are much more particular in the examination of the entrails; this case in point was at a gamekeeper's.

1119. You must be careful to distinguish between cases of real swine fever and cases of mistaken swine fever. I am rather asking you what you consider to be the causes of genuine swine fever?—I have seen only about half-a-dozen cases in my life, and there is no mistaking it I think, when you get a genuine case.

1120. And you think that originates in dirt?—I think it must. I remember a case about four miles from me; I went to see them; it had come from a place that was perfectly sound and healthy, and these pigs were terribly bad. You could smell them for half-a-mile. There was no doubt of it, not the slightest, and I myself unofficially tried to find out where they came from, and I could see no reason at all—it must have been produced by bad feeding, and the pigs lying in muck.

1121. You do not then consider that there has been any special advantage gained by the county of Dorset in regard to freedom from swine fever under its stricter regulations compared, let us say, with the county of Wiltshire, where the regulations are not so strict?—I think the county of Wiltshire gets less swine fever. Mr. Henry Ruck, of Cricklade, whom you know, keeps 800 pigs, and he has never had the swine fever. He is very careful never to get strange pigs at his place without inquiring where they came from. His opinion is worth having, he never buys any without making the most strict inquiry as to whether they are healthy. He has 800 at his place, and I have been over his place a great many times, and I can say he has never had anything at all the matter with his.

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1122. A few years ago there was a good deal of swine fever, in Wiltshire especially, a most serious outbreak, at a great milk factory at Chippenham?—There you have separated milk again; that is what most cases mean, something like swine fever. I know Mr. Prideaux had some this very summer. He knew what was the matter. He kills a lot of pork, and when these very pigs were getting unwell he stopped the milk and killed his pigs, and they had the symptoms, and all the others that had not had too much separated milk were all right, and yet they had all mixed together. It produces similar symptoms. They get scarlet marks, and inflammation in the interior fearfully—it is just the same thing. I do not know what is the real cause of it, but separated milk will produce it any way.

1123. Have you ever considered whether the view which is held by some people in Wiltshire is correct, that swine fever if not actually caused, is certainly very much encouraged by the way in which swine are allowed to lie out in hot weather in the dirt and on manure heaps and then get chilled afterwards?—That is the very thing that causes what they mistake for swine fever. Pigs will get out in the summer time in some slush to get cool, and then lie on hot manure heaps, and they are bound to suffer from a certain amount of inflammation. I believe this kind of thing will develop into an infectious disease. I really think it does.

1124. I should like to ask you what your view is as to the proper policy to pursue. You disapprove of these strict regulations which affect one county, and place it in a different position from its neighbours?—Yes.

1125. Would you be in favour of a general policy in regard to the question, carried out by the Board of Agriculture?—That is what I should be in favour of. I should be in favour of closing an occupation; I should be very strict indeed with a genuine case of swine fever. I would give a man imprisonment if he did not report it if he had really swine fever. Allowing that inkstand to be a farm, I should keep that occupation perfectly closed against everything until the thing was declared free, and probably kill all the swine if there was really bad swine fever on the farm; kill the lot unless there were any that had not been in contact at all. It would be no injury to close the place for a mile round; probably half a mile would do I should think. The county boundary, to me, is distinctly absurd. I remember once there was a case of disease near Dorchester, and the only one in our county; this was before 1887. The whole of Dorset was closed owing to that. You could not move a pig across the road at my place. Instead of that disease being at Dorchester, if it had been at Semley, which is 2½ miles from me, I could have moved where I liked. It is absurd on the face of it, and I have a great objection to county boundaries.

1126. The effect in your district is this: Cranbourne Chase is partly in Wiltshire and partly in Dorsetshire?—Yes.

1127. The result is that in a district where a great number of pigs are kept you have one set of regulations in one part and another in another?—None in one part, and the very strict Dorset ones in the other. I was talking with Mr. Prideaux the other day—he buys a lot of porkers. In coming from Maiden Bradley, in the neighbourhood of Frome, you have

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to come out of the county of Somerset into the county of Wilts and into Somerset again, and you cannot possibly keep county boundary rules. According to the rules they must stay in one county 28 days. Of course, the railway has a right to go through any part of the country with their trucks, but a man's own conveyance must not pass through the highway. In exhibiting at Yeovil when they have regulations in Somerset it is not possible for me to send my pigs by my van to Yeovil, because we go through one county to the other two or three times. They said to me, "You must send by train; you cannot take them "in your van," because I should go into Somerset and cut again into Dorset, and into Somerset again, and I should want about three months to get through according to the regulations, even for a show. All that class of thing is absurd.

1128. You are alluding to that part of the country where Dorsetshire, Somersetshire, and Wiltshire, came close to one another?—Yes.

1129. Near Kilmington?—Yes. It is extremely difficult sometimes to get things home here. Mr. Prideaux is liable to be summoned even for pork going right to the slaughter-house. That gets over me. I knew this to be a fact. Some time ago in Somerset a gentleman told me a friend of his wanted a licence to move some pigs. He sent to the superintendent of police 10 or 12 miles off, and the superintendent of police sent back to say he could not issue the licence unless he came and filled in the certificate himself. He wrote back again "Certainly you can send it to me and I can sign it at home." The superintendent said "I should not know it was your sig-"nature if you did not come yourself." This man had to go 10 or 12 miles to fill in his signature before they would grant his licence. Mr. Tucker, of Gillingham, who breeds some splendid pigs, had 16 large stores, and a gentleman at Queen Camel wanted to buy them. Mr. Tucker was 25 miles at least from Queen Camel, and the superintendent of police told this man "I cannot let these pigs come to "Somerset unless Mr. Tucker comes down and fills "in a declaration." Of course that is ridiculous. They send me the form at home and I fill it up at home. Mr. Tucker never went down and the pigs were never sold. I have never found that difficulty. It does seem absurd that any superintendent should ever ask such a thing. Of course he is carrying the law further than it is intended to be. Another thing happened in Dorset some time ago: There is this special form for getting a breeding animal in. The passenger clerk at Gillingham said "My brother-in-"law is just moving to Wimborne and he has got a "sow, and she has got nine young ones. How can it "be done." I said "Write to the Clerk of the County "Council or his deputy, and he will send you the form "to fill in." The Clerk of the County Council wrote back to say it would be impossible to bring anything in but pigs for breeding. The man wanted these young pigs because they were all pedigree. I went to our county councillor and he communicated with the Clerk of the Peace, and after all he stretched the law to allow this clerk who had moved from the station at Wilton to Wimborne to bring his pigs in. After a month's correspondence they were allowed to go down there. If she had been a sow in farrow she would have been moved readily, but because she happened to have farrowed a week before this fellow changed his situation, there was all this extreme difficulty. They were no more healthy after the expiration of that time than before the change was made. That is straining at a gnat and swallowing a camel. I have known men summoned for the most trivial things. Down in Dorset at the present moment you have to get a licence for a market. It is easy enough to obtain. The farmers fill in the declarations themselves. They fill in a form to say the pigs have been on their premises so many days, and take them themselves with the pigs. They simply sign them themselves, and they carry that declaration in and give it to the policeman in the yard. A man I know very well, living four miles from a policeman, was taking some pigs into market one day and he had no form, but thought he should be quite justified in taking the pigs into the town in his wagon and going to the station for the form, which I consider he was. In Sherborne they allow that very thing. He went, and the policeman said "Where are the "pigs?" and he said "I have got them in the "wagon. I did not want to come four miles and go "back four miles to fill in that form." They summoned him and fined him 1*l.* and costs—that is making the thing altogether grievous. This man bred those pigs, he had them 28 days, but he had them then in his wagon before signing the form. I call that a terrible thing. Men do not want all these grievous things put on them by county authorities; men resent it down our way—they resentit and break the rules, I know they do.

1130. We all feel that naturally regulations of this kind are sure to be more or less onerous or vexatious. The question is as to how far they are necessary. Now assuming the inconvenience, be it necessary or unnecessary, would you not also have tolerably severe regulations if the administration of these acts was handed over to the Board of Agriculture?—We might probably, but they would be all alike; they would be all uniform throughout the country. You would know what you are doing.

1131. Then your objection as I understand gets back to what you said just now, that you object to the local jurisdictions?—Yes, to the county boundaries. The present regulations for swine would be utterly impossible to be regularly carried out with sheep or cattle. You can of course close a whole county against cattle movement for a month, or three months if necessary, but who would hear of closing the whole of the county against cattle for six years. Salisbury market is our great market for stock; that is in Wiltshire. Just fancy not being able to buy heifers and calves for six years! I do not see why heifers and calves should be more easily obtained than swine. Salisbury is a splendid market for pigs and they are all bred in the healthiest possible manner. A man in Wiltshire can go to Salisbury market when he is just going to begin cheese making say, and buy fifty or sixty store pigs as big as donkeys that have been running in the straw yards, but it is impossible to get them into our county, and it has been impossible for six years; and they are the healthiest pigs in the world.

1132. Assuming for the moment that the Board of Agriculture takes the management of this matter over, what in your opinion would be the proper relation of the Board of Agriculture with the local authorities. You will see from your experience that there are certain differences that do exist in some respects between other animals and pigs?—I fancy there should be similar regulations to those for pleuro-pneumonia or foot-and-mouth disease. If we had foot-and-mouth disease we should very soon have some strict regulations, which I should thoroughly believe in, and also for pleuro-pneumonia. I should be the very first in the world to advocate the ones we have had in the past.

1133. In the case of other diseases of animals, portions of the diseased animal have to be sent up to London—would not that be much more difficult in your opinion in the case of pigs?—I do not think so. I have seen a great many pigs slaughtered which have been suffering from things other than swine fever, and I fancy that a swine fever pig (really a bad one) can be identified.

1134. Would there not be a danger of disseminating the disease, merely considering how difficult it is to extirpate the virus, by sending up these packages of entrails to London?—There would be a danger, but they can be disinfected before they go. I always use a disinfectant on my place. If all the breeders of

swine in this country were as careful as I am, there would be no swine fever at all. There is a great deal of blame to be attached to the breeders of swine fever —I put it like that, instead of saying the breeders of swine. They are as dirty as they can be. Everybody in this room who has seen swine at all knows that you have seen some of the most wretched hovels for pigs to live in. I imagine there would be no risk in sending the portions up in some sealed vessel.

1135. You evidently attach a great deal of importance to cleanliness. Is it the case in Dorsetshire that a great number of pigs are in unsanitary pigsties in small towns and large villages ?—They used to be, but I think they are more particular now. I think the regulations have probably effected that; in fact, the police authorities look about and report a fellow if he has a pig in a bad sty, but there are some pigs in very unsanitary places.

1136. Can the law be strengthened much in regard to dealing with such places ?—Yes ; pigs are supposed to be scavengers in a degree that they ought not to be. They are clean animals ; a pig pays for being kept clean. Other people seem to take an entirely different view to that. They look upon a pig as an animal that will rough it anyhow.

1137. Would you be in favour of making everybody who has a pigsty with pigs in it take out a licence and oblige him to comply with certain conditions ?—I should think that would be a capital idea, because they would be, to a certain extent, amenable to the law. The licence need not cost anything. If they had a licence for keeping swine, they would probably feel that they were obliged to keep them clean to a certain extent. I never thought of it before.

1138. In addition to that, certain rules should be complied with as to space, position, and so on ?—Yes. I should think that would have a wonderful effect on the healthiness of pigs.

1139. Do you think that with the people in your part—I may say our part of England, because I am a Wiltshire man, as you know—you could carry that out easily ?—I think so.

1140. It is one thing to make a law and another thing to get it obeyed ?—Of course, you must not require a palace for a pig to live in, but there are some places that ought not to be occupied by swine. There are some really that are unfit altogether. Pigs now are not allowed in towns in thickly-populated parts, but if they are well kept they might be kept almost anywhere. They are as clean as horses if they are looked after well. I think with regard to the county boundaries the people evade the law very much indeed. When the regulations are made grievous as they are made now in Dorset they overstrain it, and people get pigs brought in in the dark and all that kind of thing, which would not be the case if the law could be more easily complied with.

1141. I suppose it is very easy down there, considering the character of the boundary, to smuggle a pig in ?—Yes, I think they are smuggled ; in fact, I heard a most amusing case the other day ; I know this to be a fact : A man some three or four years ago, a poor man, bought a pig out of another county ; he got the pig in his waggon in a bag, and a most strict policeman got up and rode for two or three miles on the road with him, and there was this pig in the bag in the waggon, and the fellow was afraid of his life the pig would make a noise, but the pig did not happen to. That was some years back.

1142. You have a very peculiar boundary near Martin and Damerham ?—Yes.

1143. It would be perfectly possible there, would it not, to get a pig in well within the limits of Dorsetshire and Hampshire while still really in Wiltshire, owing to the fact that a large tongue of land projects just there ?—Yes, you are quite right ; the boundary is very peculiar indeed.

1144. That district is very thinly populated ?—Very.

1145. With an old turnpike road running along ?—Yes, never used. *Mr. Nathaniel Benjafield.*

1146. Anybody could practically smuggle a pig there ?—Yes, the place is really like a wild country with nobody there. There is no supervision over that part of the country, not worth calling it so ; one policeman would have miles to go. 3 March 1893.

1147. Assuming that the Board of Agriculture did not take over the management of the matter, I suppose you would favour dealing by some alteration of county jurisdictions with such districts ?—Yes, counties ought to agree together I always fancy.

1148. You are aware that there is an Act of Parliament which was passed in 1884 enabling those county districts to be handed over from one administration to the other ?—Yes, I have heard so.

1149. That Act has been very little used ?—Our county never seems to agree with any other county, and I can never quite make it out.

1150. (*Sir William Kaye.*) Have you had compensation paid for slaughtered pigs in your district ?—Yes, I have known small herds of three or four pigs killed. I think there have been a few pretty big lots, thirty or forty killed. They are down in the middle of the county somewhere, and I cannot point them out.

1151. How long ago ?—I suppose within twelve months. There were some at the Stowers a little time ago where compensation was paid. I remember distinctly the fact of the swine fever being supposed to be there. They killed the lot and sent some to market, and the ones that were diseased the man was paid in full for.

1152. Was the compensation paid by the Local Authority ?—Yes, by the County Council.

1153. Was that universal over the county ?—Yes, in Dorset.

1154. And it still is ?—Yes, and I go against it. I would rather lose it myself, and have sensible rules. Several farmers that are efficient men in the County Council agree with me ; they say they cannot see the force of it, but then they are not listened to.

1155. Do you not think that small holders would be much more likely to report cases of disease if they knew there would be no loss by it ?—There is that about it, but at the same time I have known people before now, when they had pigs not doing well, wish they had swine fever.

1156. If they are only paid one-half or three-fourths for a diseased animal surely that would not be a sufficient temptation for them ?—I really think some of these fellows imagine they have got something very bad indeed when they are going to be paid for it ; they are very ignorant there. I do not know any good breeders that ever get the disease.

1157. Are you in favour of the diseased animals being slaughtered, and also animals in contact ?—I should slaughter the animals in contact unless there were any exceptional circumstances, and send them to market, because of course a good pig will always do to kill. I should be rather careful about slaughtering good bred animals. For instance, a man might have an animal worth 10*l.*, which in the market would not be worth 3*l.* or 4*l.*, because of the exceptional breed of the thing. That pig could be isolated for months if that was all if it had not been in actual contact. I think pigs in actual contact with diseased animals ought to be killed.

1158. Many of the animals in contact are healthy animals ?—Yes.

1159. Do you not think the owner ought to be compensated in that case ?—They would be worth so much for death. The compensation business is like this. I saw a clown once in a circus have a fit, or supposed to do so ; he had a second and a third, and they brought some brandy, and the fourth fit he had the master said, "No more brandy," and the clown said "No more fits." There is something in it I think. I say, "No more compensation, no more swine fever."

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Mr. Prideaux says he does not want any compensation. That is the man who lives next to me, and who has had swine fever. He said, "If I get swine "fever I am perfectly willing to bear the loss. I am "perfectly willing to assist the authorities in stamping "it out," but the interference he had last time was something unbearable.

1160. It really sometimes seems to be doubtful as to whether the advantage is on one side or the other? —I cannot see it. The disadvantage of the whole thing is the county boundary.

1161. But that has nothing to do with the points? —No, but that is the thing I am strongest on. I would bear my own losses with pleasure if I had them.

1162. (*Mr. Wardlaw Ramsay.*) I understand that you say the county of Dorset is closed to the surrounding counties?—To all England.

1163. How long has it been so closed?—Since the 1st October 1887.

1164. What effect has that policy had upon the existence of swine fever in the county of Dorset?— We have had swine fever about as much since as we had before.

1165. As much as before?—I think so. We have had quite as much as they had in the neighbouring counties.

1166. Are there statistics which show that; of course there would be?—I mean to say Somerset and Wilts do not get any more swine fever than we do, and Wiltshire is open.

1167. They do not get any more than you?—No. You can go into Somerset by a licence, but you cannot go into Dorset by a licence.

1168. That does not tally with this table I have here, which shows 18 in Dorset and 101 in Wilts?— Wilts is a large county.

1169. I thought you said Wilts was no worse off? —It is a much larger county.

1170. You think there is no perceptible difference? —I think not. Probably there is a little difference in this respect, because people have not been able to get as many pigs. If you do not have any pigs at all you cannot have swine fever. A lot of people have given up breeding pigs in Dorset.

1171. (*Chairman.*) I think Wilts still has a movement order out against Hampshire?—Quite right, but only against Hampshire.

1172. (*Mr. Joseph Smith.*) You think these severe restrictions have done no good?—Not a corresponding good.

1173. You think you have decreased the number of pigs kept in the county?—People do not feed as many as they did, for our great market for pigs is Salisbury, in Wiltshire.

1174. Have you ever had it amongst your own herd?—Never. I suppose when I was a little boy 25 years ago we had one lot, and I imagine they had it, but it was before we knew anything about it.

1175. Do you think that keeping them dirty affects them?—It makes them ill anyhow, and so does giving them separated milk.

1176. That creates the disease?—Yes. The Sherborne and Shaftesbury Petty Sessional Divisions have been in the most peculiar position for a long time. You cannot move a pig anywhere unless you have had it on your farm 28 days; but we had no disease worth talking about, nothing. Fancy if a man goes to a market and buys pigs or goes to a farm he cannot move them for 28 days all over our county. This is the remarkable part of it: there is an exception made for sows and boars for breeding purposes. Now fancy, a man might send a sow to my boar for ten miles on the road if he liked, and then next day I should have to fill in a declaration declaring that no fresh pig had been on my farm for 28 days, which I should be justified in doing because that sow was an exceptional pig.

1177. These questions are county ones?—Yes. I mean to say they are too absurd.

1178. You spoke just now of every pigsty being registered. Do you think that in the country districts that could be carried out?—I should think so, because there is a policeman to every county district.

1179. Do you not think it would very much deter people from keeping pigs if they had a policeman poking about and looking after them?—I would rather it was not done anyhow I must say, but I think the thing carried out in similar fashion to the pleuro-pneumonia and foot-and-mouth orders would do.

1180. That is your opinion?—That is my real opinion.

1181. (*Mr. Shaw.*) Just a question about the separated milk. Since the use of a separator in your county has there been an increase in any sort of complaint, whether swine fever or not?—I do not know that there has, because very few people use separated milk; only those that do use it very soon learn that they have to put some fat in place of the fat that is taken out of it, or else the pigs will not do at all.

1182. I think you said that a number of cases reported as swine fever are not cases of genuine swine fever?—Not one in twenty are genuine swine fever. I have seen pigs suffering from milk fever.

1183. I am not speaking now of the high officials, but of ordinary veterinary surgeons; do you think they are sufficiently up on the matter of swine diseases?—I do not think they were; they might be now, but they formerly were not certainly. I am sure they were not.

1184. With regard to the laying out of pigs and their getting exposed to the sun's rays, and then getting wet you seem to think that that can cause swine fever?—I do as a matter of fact think that it would cause what they call swine fever. I have seen a rash come out on pigs that were lying out in the sun and got hot, but I confess I have never seen swine fever come from it.

1185. May I infer that the time of the year when there would be more of this sickness is during the milk season?—Yes, the summer time, during the hot season.

1186. Would it be any advantage to have the public boars in your county registered and the place in which they are kept under a certain amount of supervision?— I am not so sure of that. There must be some supervision wanted in some places I do think, but as a matter of fact nobody would object to signing a declaration to say their pigs were healthy, and if they sign a false one they ought to be severely punished. I do not think you ought to be bound to keep a pig 28 days.

1187. Does not that 28-day rule seem to be a little safeguard against the operations of dealers?—Dealers are blamed I fancy in our district really more than they deserve to be. Some of the most respectable men I know are dealers. I know some very good men, I do indeed, really respectable men, that are dealers; they are not all black sheep.

[The Witness withdrew.

Adjourned to Monday next, at Eleven o'clock.

THIRD DAY.

Monday, 6th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. ALEXANDER SHAW.

Mr. FRANCIS A. FULFORD, *Secretary*.

Mr. THOMAS EDWARD REDMAN, called; and Examined.

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1188. (*Chairman.*) You are, I believe, one of the managers of the great bacon-curing establishment, Messrs. Harris and Company, Calne?—I am secretary, and one of the joint managers.

1189. And you have been intimately connected with the business for a great number of years?—I have.

1190. Before we ask your views on several matters of opinion, I would ask you to give the Committee some description of the extent and character of your business, such as the number of pigs you kill, where they come from, how they are imported, and so on?—The firm of Charles and Thomas Harris and Company receive pigs from all parts of the south of England, and sometimes from as far as the Midlands and Eastern Counties. They come by rail to Calne. I should think 75 per cent. of the pigs we receive come by railway. The railway runs inside the borough of Calne, and hitherto the borough authorities have had no restrictions respecting the movement of swine fever, and the county authorities have not really affected the borough.

1191. (*Sir Jacob Wilson.*) You are referring just now to live pigs?—Yes.

1192. (*Chairman.*) The jurisdiction of the borough for this purpose was terminated by the Local Government Act of 1888, was it not?—I cannot speak as to that, for we have had no restrictions in our district for a long time.

1193. You can take it from me that it was so, and that the borough was merged into the county?—I have no doubt it was so. These pigs are, as a rule, killed the day after their arrival in Calne. If there should be more than it is possible to kill the day after their arrival they are kept alive, perhaps, till the next day, but seldom longer than that except in cases of great emergency. During the summer, spring, and autumn the pigs we receive are practically all English; during the winter months, say in November, December, January, and February, a considerable quantity of the pigs we receive come from Ireland, some *viâ* Bristol, some *viâ* Milford. These pigs, too, are, as a rule, killed within twenty hours, and sometimes within twelve hours of their arrival at Calne. The number of pigs we kill a year is about 110,000. No pigs leave our premises alive after they once enter them. I may say that for some years we have scarcely seen anything of swine fever, and that it is now very little known in our district.

1194. Will you describe to us the situation of Calne in reference to the main line of the Great Western Railway?—It is a branch line six miles from Chippenham on the Great Western Railway.

1195. How do your pigs come to Calne; what is the principal line of communication into the district?—The largest number of pigs we receive undoubtedly come up the branch line from the Somersetshire district. We also, of course, get them by the main line down from the Weston-super-Mare district, and, in fact, from all the lines all ways into Calne.

1196. Just describe to us how the pigs come from Ireland?—They come from Waterford or Cork to Milford, and thence by Great Western, or by Waterford and Cork to Bristol. They are landed in the latter case at Cumberland Basin, and driven from Cumberland Basin to the Great Western Railway, which is about two miles distant, and then they are conveyed up to Calne, about thirty miles further. The pigs which are shipped in Waterford or Cork, we will say, on Monday afternoon, are in Calne either on Tuesday evening, or at the latest by the first train at seven o'clock on Wednesday morning.

1197. How many hours are they on the journey?—They leave Waterford at four o'clock on one afternoon, and they are in Calne at the latest at seven o'clock in the morning the second day after. That is the latest; sometimes they arrive at Calne at ten o'clock the night before.

1198. (*Sir Jacob Wilson.*) Then you would say they were about thirty-six hours?—It is sometimes thirty hours. When they come *viâ* Bristol they often come in less time than that. It is of frequent occurrence for pigs which are leaving Waterford, say at twelve o'clock on Monday, to be at Calne on Tuesday evening.

1199. (*Chairman.*) Will you describe to us the precautions which are taken on the railways in regard to the disinfection of the trucks, and matters of that kind?—As soon as the pigs are unloaded every truck is lime-washed at the station at which the pigs are unloaded. May I say here, as it is rather an important matter, that we often find considerable trouble through the lime not being properly slaked. It is of frequent occurrence—when I say frequently I mean occurring, perhaps, not once a week, but several times in the course of a month—that these pigs arrive in a sad condition. When they make water the lime which has not been properly slaked further slakes,

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and the pigs get badly burnt on their haunches and along their bellies, more particularly it is on the gammon or hams, where they get badly burnt. In those cases we always get the Great Western representative to see these animals. We make complaint all the way round, but with it all I am sorry to state that it still continues. It causes terrible suffering to the pigs.

1200. (*Sir Jacob Wilson.*) Are you able to get compensation from the railway companies?—Not as a rule, unless it is a most flagrant case. In the majority of cases we do not, for the reason that the railway companies say that the animals are carried at owner's risk.

1201. (*Chairman.*) Would that lime-washing be effectual in destroying the virus of swine fever, if there was any in the excreta of the pigs deposited in the waggons?—I am hardly able to give an opinion on that, but I have no doubt it would; it is reasonable to think it would.

1202. That is your opinion?—Yes, it is my opinion that it would be. But I should like you to take note of this point, if this is a proper tribunal for it, that the lime in many cases is not properly slaked, and therefore the pigs, undoubtedly, endure a great deal of suffering. That applies not only to the Great Western, but to the South Western. When the trucks come through from the South Western they are sometimes very bad in that respect.

1203. Is there any other form of disinfection which would be equally effectual, or more effectual against possible contagion, and other bad consequence, and which would be more safe for the animals themselves than this lime-washing?—I know of none if the limewashing is properly carried out.

1204. Now, at the time that Calne was a separate cattle-plague jurisdiction, a pig coming to Calne passed through several county jurisdictions?—Yes.

1205. Three or four, in fact, I suppose?—Yes, if they came by road they would probably pass through the rural district the other side of Chippenham, pass through the borough of Chippenham, then into the rural district of Calne, and into the borough of Calne.

1206. So that a pig coming by road into Calne would have passed through several local jurisdictions?—Yes.

1207. That of the county, and at least two boroughs, perhaps more?—Yes.

1208. Now, as to a pig coming by rail, say coming from Bristol, through how many jurisdictions would that pig pass?—I suppose that you are aware that the railway is not considered to be in any jurisdiction at all.

1209. I know that, but I only want to get the fact first of all?—It would pass through the Bristol jurisdiction, and then the jurisdictions of the county of Somerset, and the county of Wilts., and so into the borough of Calne. It would therefore pass through at least four, probably more. It would, for instance, have to pass through the jurisdiction of Bath undoubtedly, and through that of Chippenham.

1210. Have you ever had any complaints, or heard of any complaints, in regard to pigs passing in carts having possibly been the cause of swine fever. Have you, in your own business, or in your own general experience, which is a large one, heard of any such complaints, whether justifiable or unjustifiable?—I have never heard of any case in which the spread of swine fever has been attributed to pigs being conveyed through the district in carts.

1211. You are no doubt aware that proposals have been made for still further enlarging the area of the jurisdiction charged with the suppression of swine fever?—I am aware of that, but I am not at all aware as to the extent which it is suggested that the proposed jurisdictions should cover.

1212. Are you not aware that the Government has taken over dealing with other diseases of animals, such as pleuro-pneumonia and cattle plague?—No.

1213. You are not aware of the Act of the year before last?—No, I am not. Really this question of swine fever has of late years been almost dead with us, and it has had very little attention.

1214. Are you acquainted with the provisions of the Act which transfer the jurisdiction of the County Authorities and Local Boards to the Board of Agriculture in regard to certain other classes of animals?—No, I am really not aware of it. I think that if provisions were made to apply, say, to the county of Wiltshire, because there was disease in Hampshire or Somersetshire, it would cause a very considerable amount of inconvenience and trouble.

1215. You are aware, are you not, that at this moment if a pig is ordered to be slaughtered, that order is issued by the local authority and compensation is paid by the local authority out of the county fund?—I think there is no compensation now.

1216. If compensation was ordered the charge would be on the county fund. Are you not aware of that?—Yes.

1217. You are not aware, I understand, in regard to certain diseases of animals other than pigs, that at this moment such compensation would come out of the Imperial funds?—No; I was not aware of that.

1218. You are aware, are you not, that restrictions on movement are now ordered by county and local authorities?—Yes.

1219. But you are not aware that since the Act of the year before last, in regard to animals other than swine, such orders relating to restriction emanate from the Board of Agriculture?—No, I was not aware of that.

1220. Now, taking the fact, as you will from the Committee here present, we are anxious to know what your opinion would be of the effect of any such change in regard to swine upon such a business as yours, and whether there are any observations you would like to put before us in regard to it?—Am I to understand that the districts would not be affected; the districts would be the same. I mean to say that any order would apply merely to the county of Wilts.

1221. It might apply to a large area which would be defined in the Order?—What I am anxious to put is, that the county of Wiltshire is not to suffer because the county of Somerset is affected; if the areas affected are to be the same as now, I do not see any objection to the Order emanating from the Board of Agriculture instead of from the local authorities.

1222. You are aware that if the Act was extended to swine there might be an order extending not only to one county, but to several?—That was the point which I was trying to clear up; that is that it would be very prejudicial if the areas were extended so that any order which was applied to Somerset might, because there was disease in Somerset, equally apply to Wiltshire.

1223. First of all then in regard to your own business, and then, secondly, in regard to the general policy of such an act, naturally we wish to hear your opinions, as a representative man, in regard to such a business. Just enlarge a little, if you will, on what you have just said, that you are afraid of the results of such an Order. In what way would it injure you?—We receive pigs in a large number of different consignments. They are brought in in ones, twos, threes, fours, fives, and sixes and twenties, and fifties. With every consignment, of course, coming to us, if it is only a single pig, there would be a good deal of routine to go through in obtaining a permit which, unless there were a real necessity for it, would be exceedingly irksome, and, I may say, very prejudicial. I quite believe in all reasonable restrictions being adopted respecting the movement of swine; but what I am anxious to place before you is that it would be very undesirable for the movement in one district to

suffer because an adjoining district was afflicted with swine fever.

1224. You have not seen any reason to regret, have you, the abolition of the smaller jurisdictions by the Local Government Act of 1888; for example, those of Calne and Chippenham?—No, I think not; in fact, I think it is rather better.

1225. (*Professor Brown.*) I gather that you rather object to what we should call large areas being declared as infected?—I do.

1226. And you object to those large areas being declared on, at any rate, the one ground that it would probably interfere with your business?—Yes, I think it would lead to a great deal of difficulty, and what in my opinion would be unnecessary trouble.

1227. But, probably, you would say that the persons who are engaged in advising the Government would know more about the matter in regard to prevention of disease than you do?—Undoubtedly. I can speak more definitely respecting the way in which it would affect our business.

1228. Do you have any sort of guarantee when your pigs are sent to you that they are free from disease?—We have not.

1229. You just take them as they come?—Yes, but if there was anything wrong we should undoubtedly see it when the pigs are killed.

1230. I am glad you have said that, because gives me an opportunity of putting a question that I probably should not have thought of: do you examine the internal organs of the pigs?—No, not unless we have reason to suppose from spots or marks on the pigs that there is anything wrong with them. If we have any reason to suspect them from that cause, then we do examine them.

1231. Do you know what is the most marked indication of swine fever in the living animal?—I understand that it is a little ulcer, if I may so say, where the small entrail joins the larger.

1232. I am referring to the living pig, the external appearance of the pig. You have the pig sent to you alive do you not?—Yes.

1233. Do you know what would call anybody's attention to the probability of swine fever being present in the living animal?—The manure of the animal being very slack and running.

1234. But there is something before that, something that anybody can see; is it recognised do you think, by your men that a redness of the skin particularly behind the ears is a mark of swine fever?—Yes, undoubtedly, but I think that very often would not be seen until the pig was dead, unless it was in an advanced stage. I think myself that the manure would be noticed certainly at an earlier stage than the redness of the skin.

1235. Would there be any possibility of noting the manure with regard to one pig when you have probably hundreds all together?—No, I do not think there would be; but if animals are sent to us as they sometimes were, and occasionally are now, and the farmer says "this pig does not feed" or anything of that kind, then we give very special attention to the pig, when it is killed, to see if there is anything at all wrong with it. Undoubtedly (not of recent years but some time ago) two or three years ago, when swine fever was prevalent, farmers, not knowing what was the matter with the pigs, did send them in such a condition as that.

1236. In a case where you suspect a pig may have swine fever do your people make any particular examination of the intestines?—Yes, the intestines are examined; but if there are other signs which we think indicate swine fever beyond much doubt, we at once send for the medical officer and he inspects the pig and he examines those intestines.

1237. So in the ordinary course of things if you suspected an animal of having swine fever or probably other disease, you would not have that animal killed and converted into bacon as quickly as possible?—We should at once send for the medical officer to examine the pig.

1238. (*Sir Jacob Wilson.*) Over how many years has your experience extended in connection with Messrs. Harris?—Twenty-six or 27 years.

1239. During that time you have had an enormous experience, of course?—Yes.

1240. At what age and weight do you receive the majority of the pigs in Messrs. Harris's establishment?—From six to nine months old, the majority; perhaps I may say seven to nine months old.

1241. And to what extent would their weight vary?—From 140 lbs. to 200 lbs.

1242. Dead weight?—Dead weight. Of course some would be lighter, some heavier, but I am giving you the general run.

1243. Has it been within your experience that many cases of swine fever have been detected on arrival at Calne?—Not of recent years. I should say, perhaps, not for the last two or three years, but some few years ago undoubtedly there were some.

1244. By what means were these detected?—First of all if a pig is sent in which has not previously been bought, or which was represented as being sent in because it is not doing well or not feeding well, at once that awakens suspicion on the part of our people, and that pig is carefully examined before anything more is done with it.

1245. That answer refers to a pig sent in from the locality probably; now let me take a case of a truck-load or more of pigs coming from Ireland or some other large source of supply; have you any special means of detecting the existence of disease in that truck-load of pigs without possessing any previous history?—No, unless there was anything that we thought was suspicious in the appearance of the pig we should take it that the pig was thoroughly right and good.

1246. May I ask in what direction your suspicion would point in the case of a truck-load of pigs?—If a truck-load of pigs were sent on without our being duly advised, or if they were sent on in an immature condition before they were really properly fit for our purposes, then at once we should think they were not quite right.

1247. That might apply to other diseases besides swine fever?—It might apply to anything.

1248. Let me suppose a case of a truck-load of pigs which were in prime condition and which had been exposed to disease elsewhere and probably had the disease in a latent form, some developing it more rapidly than others; would you be likely to discover it by the external appearance of the pigs?—I think it just depends upon how long the pigs were in transit.

1249. Never mind that; you may assume that there is a case of disease developing in the truck-load of pigs; do you think it is possible for you to detect it?—Not if it was at a very early stage. If the pig had just contracted it, and it had not developed into anything which was visible, certainly not.

1250. Supposing at the next stage, would it be possible to detect it?—When the pig was killed, if its lungs were in a bad condition——

1251. I do not want to get at the stage of death. I want to see whether in the case of a pig on arrival it is possible in the natural order of business that you can detect the existence of swine fever in a truck-load of pigs; I will not say at what stage, only before it is killed?—My answer to that would be this: in a very early stage I do not think so; but if it was in an advanced stage undoubtedly it would be detected.

1252. What would be the appearance of the pig that would induce you to think it was diseased?—The manure from the pig would be very slack and the pig would be, if I may so say, in a sleepy, stupid condition, and if it were very advanced undoubtedly you would see a redness of the skin.

1253. Now, supposing you observe a redness of the

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skin how do you know that that is swine fever as distinguished from erysipelas?—We should not consider ourselves competent to decide the question. We should merely send to the medical officer; we should say "there is something wrong in this pig apparently, "what have you got to say about it?"

1254. Would that be the medical officer or the veterinary inspector?—The medical officer.

1255. Having sent for the medical officer and had his opinion upon what the disease is, what is then your action with reference to that pig?—We just follow his instruction, and generally our action is to melt it down; if the pig was in a very bad state our action would be to bury it.

1256. Are you aware whether compensation is at present paid in Wiltshire?—It is not paid.

1257. Do you see any objection to giving compensation for animals diseased or slaughtered after being in contact with disease?—I think it would be very desirable to give compensation; for this reason, that I believe where no compensation is given a feeder, a farmer, is very likely indeed to hush it up; in fact, I may say, although I can hardly call definite cases to mind, that farmers have said to me, "I had a "pig; I buried it; there was something wrong with it."

1258. I believe swine fever exists in some form in Wiltshire at the present moment?—In the Chippenham district, I believe; there are only three or four cases, and those, I think, have arisen within the last fortnight.

1259. Do you think that the farmers of Wiltshire attach any very great importance to swine fever at all?—Yes.

1260. You think they do?—I think they do; very great importance. By the Act they are put under very great restrictions as to the time in which they can receive pigs in again, after they have had an outbreak of swine fever, and also every healthy pig on the place is killed and they get no compensation at the present time. I believe that certainly tends towards their hushing it up and saying no more about it. I believe, as a matter of fact, that when compensation was first withdrawn in some mysterious way the number of outbreaks very much decreased.

1261. Are you aware that there is a great want of uniformity among the various local authorities of England in regard to restrictions, and that no two counties necessarily adopt the same system?—I think that is so. I have no doubt that it is highly likely that it would be so.

1262. Is not that a source of great complaint on the part of farmers and others?—Personally I cannot say that I have come much in contact with it. Of course, I really come in contact only with the Wiltshire feeders.

1263. Have you heard any complaints in Wiltshire, or rather have you any reason to complain of the districts as at present arranged?—No; I think the districts as at present arranged are very suitable.

1264. Now, in answer to Professor Brown, you seemed to have some fear that, in the event of the Board of Agriculture, or, as we will call it, the Central Authority, taking the administration of this into their hands, instead of leaving it as at present in the hands of various local authorities, districts might be formed which would be too large and highly inconvenient?—Yes, that was my fear.

1265. Are you regarding this under the impression that swine fever is likely always to exist in this country?—I hope it may not be; but, having previously been practically extinct and cropping up again here and there, I fear, it is not at all unlikely that we shall, whatever restrictions are in force, get these outbreaks from time to time. To substantiate that, I may say that it is impossible to say how these cases which have just now broken out in Wiltshire have arisen. I know of cases in which no pigs have been brought on the farm for months—perhaps, I might say, for twelve months—but yet there has been an outbreak in an isolated district, perhaps miles away from where there is any other known outbreak.

1266. Does that lead you to the impression that it may have a spontaneous origin?—Yes.

1267. Can you indicate in any way what does produce the disease?—I am afraid I am not able to say, but I may say this, that I have often known pigs which have been lying on heated manure heaps, develop from some cause or other, which I am not able to understand, what is supposed to be swine fever.

1268. Or some disease which is called swine fever?—Just so.

1269. A pig lying on heated manure would probably be more likely to contract some form of lung disease?—Probably it may be so, but I believe many such cases as that were pronounced to be swine fever. Whether they were or not, of course, I do not give an opinion.

1270. Is it your impression that swine fever is well understood by the veterinary profession in your part of the world?—I think it is very doubtful. I think very often they have gone on the safe side of pronouncing it to be swine fever when there has been no swine fever about it. I think it is a very common opinion; in fact, I may say that I think nine farmers out of ten will tell you the same. I have said that I think pigs lying on heated manure would be predisposed towards swine fever; there are other cases in which the pigs have had no access to manure heaps and where they have been kept with the most scrupulous cleanliness, where the sties have been cemented without joint in floor or sides, and yet where they have had swine fever. Some of the most troublesome and persistent cases of swine fever occurred in such premises. But I think probably the reason of that was that there was not sufficient air, although it was a large airy building. There was a large number of sties under one covered roof. It was almost a model place in the way of construction otherwise.

1271. Was it proved that there had been no recent introduction of pigs from other districts?—Undoubtedly it was a place where they were frequently buying, but in many cases it arose when they had not had any fresh pigs on the premises for, I may say, two or three months, or three or four months.

1272. Was there disease in the neighbourhood?—It is highly likely there was.

1273. I suppose there are such things as pigeons and birds of all sorts flying about?—Yes.

1274. And rats?—This was a place where a rat would not find a footing, I think, for it was cemented for 4 ft. up the sides.

1275. But the rat could not tell that till he got there to find it out?—He could not find a home there.

1276. Have you any reason to think that there is a certain amount of fraudulent dealing going on among dealers with regard to pigs which are infected with the disease?—I do not think that a dealer would knowingly circulate pigs which had swine fever.

1277. I suppose there are dealers of various degrees of importance in Wiltshire as elsewhere?—Undoubtedly there are. I do not say that a dealer who is a little afraid of something, but will say, "Well, I "will get these off as quick as I can," but I have not known of any case where it could be shown that a dealer knew that the animals were affected with swine fever when he passed them on.

1278. Would you think it a desirable thing that pig dealers should be licensed?—No, I do not think they should. That is a new question, and I have hardly thought about it. I would rather not express an opinion upon the subject.

1279. Have you any large pig markets in your neighbourhood?—The pig markets in our district are merely for store pigs—that is, in an unfatted condition. There are markets at Devizes, where, perhaps,

there may be occasionally as many as 300 or 400 pigs brought to the market, and also at Chippenham.

1280. (*Mr. Shaw.*) Not fat pigs?—Not fat pigs; not one lot in 500 would be brought to market in a fat condition.

1281. (*Sir Jacob Wilson.*) Have you ever heard of disease being traced to any of these markets?—Undoubtedly there have been cases, I am speaking now of two or three years ago when disease was fairly rife, which undoubtedly were occasioned from unsound pigs being bought at market, and thus it was brought home.

1282. I think you have told us that you get most of your pigs from the South of England and the Midlands, or from Ireland?—Yes.

1283. Have you been in the habit of importing pigs from foreign countries?—No. I can remember our doing so, but it was twenty years ago, perhaps. I should think we have not imported foreign pigs for twenty years.

1284. Do you object to tell the Committee why you do not import foreign pigs?—It is merely because they cannot be got at the price at which home pigs can be. Another thing would be the distances which they would have to be brought, which, of course, would be prejudicial. It was Dunkirk from which at one time I remember we used to receive them, and that is the only place from which we ever received any foreign pigs.

1285. (*Chairman.*) There is no very easy communication with Southampton; for example, from Calne is there? I mean your easier communications are with Bristol and London, are they not? I am asking you with reference to the importation and the railway facilities to Calne, which are greater east and west than south?—Yes. You have to go on two lines (via Salisbury) for Southampton. I may say that the county of Hampshire is at present the only district which affects us with regard to the question of swine fever. From Hampshire and from the Isle of Wight we get a considerable number of pigs, and we have to get licences from that district, and that is the only district. I suppose it is because of the port of Southampton, but I do not know.

1286. (*Sir Jacob Wilson.*) I suppose, as a matter of fact, pigs cannot be imported except for slaughter at the port of landing, according to the present Orders, and you would not wish to import them dead?—No.

1287. (*Mr. Shaw.*) When hogs come into your factory to be killed, and are killed, and a pig shows red on the skin, do your workmen always assume that that is a case of swine fever?—They assume that there is something wrong, and the medical officer is at once sent for.

1288. It has been stated here that most of the diseases which a pig has show red on the skin?—Swine fever is practically the only disease we know much about.

1289. Do you report to the medical authority all cases which when killed show red on the skin?—Yes. Sometimes there might be red spots all over the skin.

1290. That would be what we call diamonds in my part of the world, and which the Veterinary Department call nettle-rash?—Something of the kind. In a case of anything of that sort the medical officer is called in.

1291. You have large dairy farms in Wiltshire, have you not?—We have.

1292. Have you had any complaints of separated milk giving swine fever?—The case I alluded to just now where there were frequent outbreaks of swine fever was where the pigs were fed on separated milk.

1293. (*Chairman.*) Describe where that is?—It was at the Chippenham Milk Factory, the Anglo-Swiss Condensed Milk Company's place, in which there were the most frequent and unaccountable cases of outbreak of swine fever. The then manager put up what he thought a model place, which no swine fever could touch; but from that time they were pestered with it more than ever. Since then they have appointed a new manager who does not feed the pigs so heavily on separated milk; he dilutes it much more, and although he has had some cases they certainly have not had so much trouble as they used to have.

1294. (*Mr. Shaw.*) Are you quite sure that those were genuine cases of swine fever?—They were said to be by the Veterinary Department.

1295. Had you any hogs in your establishment that were ailing at the time?—I do not remember that we ever had any that were ailing. We used to receive a large number of pigs from them.

1296. In Ireland we have had great complaints of separated milk killing the calves by constipation, and I have heard the same complaints as regards pigs; but I have never heard of it as being the cause of swine fever, and that is the reason why I asked you, do you really think it was genuine swine fever?—That I am unable to say, inasmuch as, although I know they were said to have swine fever, I could not say whether it was swine fever or whether it was not. I could only say that the veterinary surgeon reported it to be swine fever. I ought to explain that in my answers just now I ought to have said the pigs were fed on the refuse of condensed milk, not separated milk.

1297. With regard to the damage to the pigs through disinfection of waggons with lime which has not been properly slaked, who does that disinfection?—The railway companies.

1298. Then, of course, they are liable if it is not done properly. Why do you not insist on getting compensation?—Because the pigs are carried at owner's risk. Perhaps I might say that owner's risk at the present time is within a few pence of Company's risk.

1299. As a matter of fact you have to complain about the disinfection of the waggons being improperly done?—We have, frequently.

1300. Does it occur to you that if a few pounds of carbolic was used instead of lime, it would have the same effect and would be less destructive to the skins of the animals?—I know carbolic to be a strong disinfectant, and I have no reason to think that it would be ineffectual. The only thing I suppose would be that there would no evidence of its having been thoroughly done all over. That is the only objection I can see.

1301. According to the returns in 1892 there is a falling off of disease; what is your opinion as regards that falling off; was it a genuine falling off, or was it caused by the fact that farmers did not report their cases of swine fever, inasmuch as they got no compensation?—I believe that in 1892 there was a genuine falling off in our district.

1302. A genuine falling off in proportion to the reduction in the number of pigs in the country?—Yes; undoubtedly. I believe there was less swine fever.

1303. In proportion to the smaller number of pigs?—Yes; in 1892.

1304. Of course you are aware that the supply of pigs fell off very considerably in 1892?—Yes; undoubtedly.

1305. Have you ever got pigs through from Connaught?—We hardly know where the pigs we get from Ireland are brought from.

1306. You may take it as a rule that they are nearly all black hogs that come from Connaught?—What you call "sheety." We object to them, and we do not have them, or rather, we have very few, for our instructions to our buyers are not to send that class of pig.

1307. The reason I asked you that question was that we always think there is a little more swine fever in Connaught than in any other part of

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Ireland?—If we know of one of our buyers going to Connaught we give him a blowing up and tell him not to go there again.

1308. (*Sir Jacob Wilson.*) I suppose you cannot trace pigs beyond the port of debarkation?—I do not know.

1309. As a matter of practice, do you?—No; in fact, I may say I never remember having a case of swine fever in Irish pigs.

1310. (*Mr. Shaw.*) What is your experience of Irish pigs with regard to swine fever?—I cannot be positive; but I do not remember that we have had a case. I have no case in my mind at the time. As far as my experience goes I do not remember a single case of swine fever occurring in the Irish pigs.

1311. You can refer back for a long time?—I can refer back for 15 years.

1312. Is Wiltshire a breeding country?—Yes.

1313. Do they breed nearly all the pigs that they fatten in Wiltshire?—No.

1314. Then where do your suckers come from?—They come very much from the Hampshire district, and the Reading district, and the Newbury district.

1315. (*Chairman.*) A great quantity come Wiltshire itself?—A great quantity; but there are not enough pigs bred in Wiltshire to meet the demand.

1316. (*Mr. Shaw.*) Did you say they mostly come from Hampshire?—Not mostly; some from Hampshire, some from Berkshire.

1317. Do they come from Bedfordshire?—I do know of a case of a person who now has some pigs from Bedfordshire, but I should think there are not half a dozen cases in the year that come to my knowledge of pigs from Bedfordshire.

1318. I may mention to you for your information that evidence was given before us within the last day or two that Bedfordshire was almost a hotbed of disease with regard to swine fever; could it be possible that some of the cases you have mentioned could be traced in any way to Bedford?—I have nothing in my mind to that effect. I do not remember any case which could be considered to have come from Bedford. In fact, as I say, the cases are so extremely seldom in which pigs are received from Bedfordshire.

1319. You said that two or three years ago swine fever was very rife. Of course, you are aware that the stock of hogs in England and in Ireland was then very large indeed?—Yes, I should think so.

1320. Might not much of that swine fever have come from the over-crowding of the county being so great that there was a want of inspection?—I do not think so.

1321. Would you be in favour of registering all the stations where boars are kept, inasmuch as the sows visiting the boars are very apt to carry the disease, if the boar had been in contact with a diseased sow a short time previously?—I should think that might be a very desirable precaution.

1322. (*Mr. Wardlaw Ramsay.*) You expressed yourself in the early part of your evidence as rather apprehensive, that if the Board of Agriculture was to take this matter into its control, and were to stop the traffic of swine in Wiltshire because there was disease in the neighbouring counties, it might be a hardship to your business; I can understand that that might be so supposing that there was no disease in Wiltshire, and yet the export of pigs from Wiltshire into other counties was prohibited. Supposing that the import of pigs into Wiltshire, where there was no disease, was prohibited, but that the export from Wiltshire into other counties was not prohibited, would you still consider that a hardship? Have I expressed myself clearly? It is easy to understand that that might be considered desirable, supposing there was no disease in Wiltshire. Of course, I know that you do not export live pigs yourself, and I am merely asking you to answer the question from your general knowledge?—I do not see myself why there should be any restrictions on the movement of pigs from Wiltshire if it is a thoroughly healthy county.

1323. The object of the Board of Agriculture is to stop the disease and to eradicate the disease in the country. Supposing that they found it necessary to prevent affected counties from exporting pigs, and they were to leave the unaffected counties without any such prohibition, would you consider that a hardship?—Not as regards store pigs for feeding purposes, but it would be a very great hardship as regards pigs fattened for bacon, inasmuch as in many counties there is no bacon-curing establishment, and if feeders were prohibited sending their pigs where there is a market for them they would hardly be able to dispose of them at any price.

1324. In fact, do you think that generally the local authorities would get support from the persons in your special business, and in agriculture, from the farmers generally, in carrying out their restrictive policy; do you think that they would regard with favour this endeavour on the part of the Board of Agriculture to stop the disease by means of restrictive measures and otherwise, such as have been indicated?—I think that if the restrictions were made more onerous than they have been in the past they would not be regarded with favour by the feeders.

1325. If they were made more stringent?—More onerous. Speaking generally I may say that when cases of swine fever have broken out on a farm, that the farmers have thought the precautions have been extremely severe; I do not say unduly severe, but that has been the opinion of the farmers.

1326. I think you said that for the last two or three years there has not been much swine fever; do I understand that to apply to the borough of Calne?—I speak of a distance of ten, or fifteen, or twenty miles round.

1327. For the last two or three years there has not been much swine fever there?—That is so.

1328. Can you give any reason for that, that is to say, is there anything to which you attribute that immunity?—I am not able to explain it, unless the restrictions which were in force were effectual in having stamped it out to a great extent.

1329. Although there was no compensation given?—There was no compensation given.

1330. (*Chairman.*) Compensation was given at a comparatively recent date?—Until a few years ago.

1331. (*Mr. Wardlaw Ramsay.*) But it is since then there has been this immunity from disease, I think I understood you to say. You said not for the last two or three years?—Yes, I believe so. That is our experience in our district.

1332. Just one or two words about your methods of purchasing pigs. I understand that you do not go into the markets yourself; you have nothing to do with that, you have purchasers or agents, have you not?—We have agents, if you may so call them. Perhaps they may be dealers, cattle dealers, and so on. They go about the country, and wherever they meet with these pigs they buy them on our behalf by weight and send them on.

1333. It does not concern you in the least where these pigs come from?—No.

1334. You have nothing to do with the markets yourself?—No.

1335. Naturally, if one of these dealers were to see a pig which he was suspicious of, he would refuse to buy it, would he not?—I have no doubt he would.

1336. But that would not come under your cognisance?—No.

1337. You would never hear of it, would you?—We might not.

1338. In your own business do you breed pigs?—We do not.

1339. You never feed?—We never breed or feed pigs.

1340. And therefore you never keep pigs longer than the time which you have indicated?—No.

1341. And that is a matter of hours rather than days?—Yes.

1342. You have several times stated that in a case of doubt as to disease you would refer to the medical officer; do you employ a veterinary inspector?—No.

1343. Do you consider that when you have reported to the medical officer your responsibility ceases?—Yes.

1344. Would you expect that an ordinary medical officer, not specially acquainted with veterinary subjects, would be able to detect swine fever?—I think he has always acted on the side of caution. If there is anything suspicious, he has ordered the animal to be destroyed.

1345. He does not himself go to a veterinary surgeon?—No, I do not remember any case in which he has himself referred to a veterinary surgeon.

1346. (*Professor Brown.*) When you say that you send to the medical officer, do you mean only in reference to dead pigs?—Yes.

1347. But if you saw a living animal which you thought gave evidence of swine fever, what would you do then?—I may say that we have never given much attention to the animal in its live condition. If the animal is suspected, we say kill it at once, and we will have it seen to directly it is dead; because we consider that the indications are much more clear when the animal is dead than when the animal is alive.

1348. Supposing the indications were so perfectly clear that you could not possibly make a mistake, and that you were sure it was swine fever, what would you do then?—We should send to the medical officer undoubtedly, and abide by his instructions; but I do not remember such a case.

1349. I am merely supposing that such a case occurred. Apparently from your answer you are not aware that under the Contagious Diseases (Animals) Act of 1878 you are bound to give notice to the police-constable of your district if you are in possession of an animal affected with disease: for this particular purpose, say with swine fever?—I have forgotten it if it is so, but, as I say, it is some years ago since we had really any experience of the question of swine fever. As a matter of practice our first step is to send at once to the medical officer.

1350. I apprehend that in sending to the medical officer the chief idea is with regard to the public health. You want him to decide whether or not an animal is fit for food?—That is it.

1351. I want to get your opinion on a case which I will put as strongly as possible. Supposing the Board of Agriculture take charge of this disease and think it necessary to make the whole of England an infected area. Supposing also that they provided for the movement of pigs for slaughter, would that in any way affect your business?—Yes, it would very considerably, inasmuch as it would mean a very large amount of work to get the number of licenses which we should require. Not only so, but it would entail a great deal of time and inconvenience, inasmuch as there are many country districts where it takes two days to get a letter through the post. A person in one of those districts has to send us a declaration form; he posts it to us say on the Monday, it reaches us perhaps on Tuesday afternoon; we get the license on that declaration from our authority; we pass it back to that man; he does not get it back again till Thursday morning; he then has to order the truck, and the end of the week has come almost before the routine is carried out. In many cases it would be extremely inconvenient, and would give an immense amount of work, which, in my opinion, would be unnecessary.

1352. You get a good many pigs from Bristol, I suppose?—Through Bristol from Ireland.

1353. Do they come direct from Ireland?—Yes.

1354. Into your own factory at Calne?—Yes, they are consigned through.

1355. Are they unshipped into trucks and brought direct to your nearest station?—They are unshipped at Cumberland Basin and driven to Bristol station and there trucked and brought straight into Calne, which is within a quarter of a mile of our works.

1356. That is to say the pigs are purchased in Ireland?—Yes.

1357. Then it would be no inconvenience to you if they were licensed at the time at which you purchased them, and were sent through with that license? In saying "no inconvenience to you," I mean to the whole of your trade?—No; but then you see those pigs—perhaps a couple of hundred in all—may have been bought of fifty different people in the fairs, and may have come from different places.

1358. It would be, therefore, necessary to mark your's in some way in order to separate them from other persons?—I think you do not perhaps understand it. You are talking about getting licenses on each consignment of pigs from Ireland. Do you mean to say that they would be licensed on inspection at the port of export, or are you pointing to each lot of pigs, each two or three or whatever it may be, having a separate license from the place in which they are purchased?

1359. You mean that you purchase them from different persons in Ireland?—The buyer goes into the fair, and there he perhaps buys two of one man, three of another, four of another, and so makes up perhaps 150 or 200, or whatever the total number may be.

1360. I want to understand this particularly, because, of course, it affects the whole question of the trade in pigs from Ireland bought for slaughter. I understand what you would think reasonable, and probably from your point of view necessary for the convenience of your trade, is that the pigs should come as they do now direct from Ireland to your factory?—Yes.

1361. At the same time, if it were necessary to put certain restrictions in the form of licenses on their movement, yet if those licenses did not interfere with the transit it would not affect your trade or the trade of other firms engaged in the same way?—No.

1362. Do you buy pigs from markets in England?—Not from markets in England.

1363. From persons in England?—Yes. Our agents go to the different markets on the market day, they see a farmer, and perhaps he says, "I have ten pigs at home." They agree as to the price, and the day they shall be sent. It may be that the agent never sees those pigs.

1364. How does your agent buy?—He buys them by weight, at a certain price per dead weight.

1365. Could not your agent at the time he buys them proceed to get a licence to move them directly to your factory?—It may be that the pigs would not be fit to be sent for a week or ten days after they were bought. He would have to get a declaration from the owners of the pigs, which I believe has to be made within two or three days of the time at which the pigs were moved.

1366. If you do not want them in a great hurry, and apparently as they may stop for ten or twelve days, you do not; could it not be arranged beforehand, because the owner has to get a declaration? Could he not make the declaration and get the licence too?—Undoubtedly it could be done, and it was done at the time when the disease was very prevalent, but we found, as a matter of fact, that it made an immense amount of difficulty. Of course it had to

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be done, and it was done; but I think if those restrictions were permanent, they would be extremely onerous.

1367. Is it your impression that on the understanding that swine fever would be stamped out in a reasonable time people generally would put up with those restrictions?—I think I might almost say that it has been practically stamped out in the districts in which we were affected for some two or three years past. It would have been very onerous if those restrictions had been enforced during the time at which there was no need for them, or practically no need.

1368. Yes; but you would be affected by restrictions acting on distant places if you buy pigs. I will assume that Cumberland were to be shut up, with the exception that pigs may be moved for slaughter; would you then still have to submit to that inconvenience in order to get your supply?—We have to do so at the present time as regards Hampshire, but if the same thing were to apply to all the districts as it does with regard to Hampshire it would cause a considerable amount of inconvenience both to ourselves and to the owners of the pigs.

1369. But it is fair to assume that the necessity for a license would only arise in regard to certain parts of the country in which disease either existed or was likely to exist?—Yes.

1370. And therefore it is the case, is it not, that you would only be put in exactly the same position as you are put now by the local authorities?—Where there was swine fever I think it is quite reasonable and right that there should be these restrictions, but what I was trying to explain was that I think it would cause an immense amount of work and inconvenience if those restrictions were put in force generally, say for a term of two or three years.

1371. But the restrictions are not put in force for a particular period; they are always so arranged that they can be revoked at any moment when the necessity for them ceases to exist?—If we had to get a licence for every lot of pigs (perhaps it may be a hundred licences a day), and these had to be sent and so arranged that they were obtained in time to be in the hands of the senders at the same time that the trucks were at the station ready to take the pigs, I think that that would mean an immense amount of labour and difficulty.

1372. If the circumstances made it necessary that the restrictions should be applied extensively, I take it that you would submit to the inconvenience?—Certainly, if there were really need for it.

1373. Whether need or not, if the restrictions were imposed you would prefer to submit to them rather than give up your trade?—Undoubtedly.

1374. (*Sir Jacob Wilson.*) Might there not also be another alternative—that you would look to other districts, in which there was no disease, to get your supplies from, so that you would not have to submit to these restrictions?—I do not think so, because, practically, all the pigs that are fed are required.

1375. Have you a veterinary inspector, appointed by the local authority, living in your neighbourhood?—I daresay we have.

1376. Has he ever paid a visit to your establishment?—I do not remember it.

1377. Are you aware that he has a power of entry?—If he came we should not question that.

1378. Are you aware that he possesses the power if he thought proper to come?—No, I was not aware of it.

1379. Would you consider that there would be any objection to a veterinary inspector having such power in a case of suspicion?—None at all.

1380. I think you have said that Wiltshire had been practically clear of swine fever for some considerable time until some recent outbreak?—When I speak of Wiltshire I speak of the district round about us, but I believe the same remarks do apply to Wiltshire generally.

1381. Have you any means of knowing to what the re-introduction of the disease was due?—I have none at all. I believe that it is impossible to trace the cases, which I have heard of within the last few days.

1382. I presume that every attempt has been made to trace them?—I merely speak of what the inspectors have said.

1383. Do you mean to say that all your pigs are bought by your agents by weight?—By dead weight at a certain price per score.

1384. Has the system of buying by live weight been yet established?—No, it has not.

1385. Do you see any objection to it?—No, not at all.

1386. (*Mr. Wardlaw Ramsay.*) How can they be bought by dead weight if they are bought alive?—They are bought alive.

1387. Allowing a certain proportion of their weight when alive as dead weight?—No, they are weighed dead.

1388. (*Sir Jacob Wilson.*) Does the weighing of the pigs rest in your hands?—Yes. The feeders are perfectly at liberty to come and see them weighed if they like, but as a matter of fact they scarcely ever do.

1389. Does that apply to pigs imported from Ireland in the same way as to pigs from any part of England?—No, the pigs imported from Ireland are bought at a fixed price of so much per pig, but that does not apply to any case in England.

1390. (*Mr. Shaw.*) If there is more than one you buy them at so much a lot?—Yes.

1391. That is if a man has got four pigs you give him 15*l.* for the lot?—Yes.

1392. (*Sir Jacob Wilson.*) Does that distinction between the different systems in England and Ireland hold absolutely without exception?—Yes.

1393. I do not know whether I am asking too much, but I am rather anxious to know what becomes of the offal. The stomach of a pig may be diseased, and it may probably be the means of carrying the disease?—If you are speaking now of the entrails, I may say that entrails are cleansed immediately on the pig being killed, and that they are prepared for human food.

1394. In what way may I ask are they prepared?—They are cleansed of all the contents, and after that they are thrown into salt water, and then they are sent to different parts of the country, say to Bristol and other places where they are cooked.

1395. They are not subjected to heat?—They are not.

1396. (*Mr. Shaw.*) What do you refer to—to the chitterlings?—Yes. They are cleansed with hot water.

1397. (*Sir Jacob Wilson.*) As a matter of practice do you take pigs of all breeds for your purposes?—Yes.

1398. Do you make any distinction as to colour?—None whatever.

1399. Could you give us any idea as to the proportion of the various colours?—The Wiltshire pigs are practically all black.

1400. I mean to say the proportions of the 110,000 which you kill?—The Irish pigs would be nearly all white; they would be perhaps 25,000 or perhaps less—20,000 of the total number; but I am speaking rather without book.

1401. I only want you to speak generally?—I think you might say, taking English and Irish pigs together (for there are districts in England where we get the white pigs, for instance, the Suffolk district), that 25 per cent. would be white and the others black.

1402. What proportion would be red?—Do you mean what we call "Tamworth"—the sandy pigs?

1403. Yes?—Practically there would be none wholly red. What we should get would be red and

black cross-bred pigs, and those I should say would not be 5 per cent.

1404. About 5 per cent. ?—Not more than 5 per cent.

1405. As a matter of fact they have increased somewhat lately, have they not, owing to the idea prevailing that you get more lean meat from them ?—Yes, we have endeavoured to introduce the Tamworth cross to some extent, but I am afraid it is rather dying out for the reason, whether it is right or wrong, that people think they are not such good doers.

1406. At the first cross is it not your experience that they do very well ?—Yes, I believe they are an excellent sort of pig.

1407. (*Mr. Shaw.*) Do you cross them with the Berkshire ?—Yes, we cross them with the Berkshire, and there is nothing better.

1408. (*Sir Jacob Wilson.*) In the event of a serious outbreak of swine fever in your district, have you any suggestion to offer for the institution of a form of restrictions other than those which at present exist ?—No, I think the present regulations should be rigorously carried out.

1409. You are perfectly satisfied with them so far as your district is concerned ?—Yes ; but I may say here that I think that at the present time farmers are not aware, or rather they have forgotten it, as it has not been brought before them, of the present law as regards the necessity of making it known if they have any disease. I believe there are farmers in our district who would not know that they were breaking the law by merely killing any pigs which they thought were wrong and burying them. The law has got to be a dead letter to a certain extent, and you do not see any notices about.

1410. That is owing to your immunity from disease ?—The immunity from disease has practically made people forget almost all about it. I was speaking to a farmer only on Friday last, and he said : " I really do not know whether the Act is in force " now or not—is it not rescinded ? " I think it is highly necessary that it should be well known that the law is unaltered. I believe if a person were convicted he would plead ignorance of the law being in existence.

1411. (*Chairman.*) You are then rather of opinion that the cessation of paying compensation by the county had had the effect of causing negligence in regard to reporting cases ?—I have no doubt about it at all.

1412. I believe one of the members of your firm is a member of the Cattle Plague Committee, is he not ? —Yes, Mr. Thomas Harris.

1413. Have you ever noticed or ever heard that swine fever attacks certain classes or breeds of pigs more than others ?—No.

1414. Pedigree pigs for instance more than ordinary pigs or *vice versâ* ?—No, I have never had any reason to think that such would be the case.

1415. There are a very great number of pigs, are there not, kept all round Calne and in Wiltshire generally by cottagers as well as by farmers ?—There are ; nearly every cottager has his allotment and his pigs.

1416. And also even in the small towns pigs are kept ?—To some extent.

1417. There has been a considerable difficulty from time to time, has there not—I do not mean in Calne particularly—in dealing with pigs so kept ? —Yes, I believe there has.

1418. Now, I would like to ask you some questions arising out of that : In regard to the action of dirt on the disease, what is your view as to the effect of dirt in keeping up the disease ?—I have no doubt that where pigs are not properly kept they are much more likely to contract the disease than where they are well kept. The only modification of that is respecting that place at Chippenham, which I was speaking of, where the pigs were kept in model sties ; I believe myself that the outbreak of fever there is to be accounted for by the two things I have mentioned—by their being rather overfed with too rich food namely, the condensed milk, and also by all the sties containing perhaps a couple of hundred pigs, being under one roof.

1419. Were those pigs, so far as you know, fed on condensed milk, or upon the surplus milk which had not been condensed ?—I believe they were fed upon both—that is, the refuse ; and also that they were fed on what I think they call " blown " tins, which are sent back, or something of that sort.

1420. (*Mr. Wardlaw Ramsay.*) Were they not fed on separated milk—that is, milk separated by a centrifugal separator ?—I have no reason to think that such separated milk is prejudicial, or predisposes pigs to the fever. In some previous answers I have given about the effect of separated milk, I was not thinking of milk separated by a separator but of the refuse from condensed milk.

1421. (*Chairman.*) Have you ever considered whether more could be done at present by way of sanitary regulations in regard to pig-sties, especially in small towns, to prevent the spread of the disease ?—I believe it is very desirable that the sties should be kept better. Are you speaking now particularly with respect to the spread of the disease, or respecting the proximity of houses ?

1422. I am talking now with regard to the spread of the disease. We have had evidence given here that the filthy condition of pig-sties, although it may not actually generate the disease, tends to keep it up ? —I have no doubt at all of that.

1423. Witnesses have given it as their opinion that it might be a desirable thing to arm the county and local authorities with greater powers than they now have to enforce cleanliness as a preventive ?—I think it would be highly desirable.

1424. Do you think that local opinion would submit willingly to such regulations ?—I do.

1425. There has been a good deal of trouble, has there not, from time to time in Wiltshire in regard to the bye-laws under the Public Health Act with respect to pig-sties in proximity to the houses and matters of that kind ?—Yes, there has been very great difficulty.

1426. And you are not apprehensive that, if those regulations were made to extend not only to such matters as proximity to houses which relate to human life, but also to the size of the pig-sty and the keeping of it clean for the sake of the animal, and to so prevent swine fever that there would not be great opposition ?—There might be some, but I believe it would soon die out. I do not think it would be anything to seriously consider.

1427. Do you think that the good sense of the community would prevail ?—I think so.

1428. You said just now that you considered that pigs lying out on hot manure heaps was the cause of the disease ; I know that is an opinion largely held in Wiltshire, but is it not rather the opinion that the pig gets into a cold place afterwards, and it is the subsequent chill which is said to create the disease ? —Not in my opinion. My opinion would be that he would go from his sty, perhaps, where he was lying, and he would get on this manure, which was hot, and he would enjoy his lie there and stay a long time, and that that would be the cause of something going wrong with him.

1429. Do you think that that would create genuine swine fever ?—That I am not able to say, but I think it is likely to predispose the pig to it.

1430. Is the medical officer to whom you refer specially attached to your firm ?—No, he is medical officer of the borough of Calne.

1431. And you send for him when a case arises ? —Yes.

1432. I believe you never put the brand of your firm except upon an undoubtedly sound animal ?—

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That is so; and I can go further than that—we never cure an animal unless it is undoubtedly sound.

1433. That is what I meant?—I thought you were alluding to some animals which, perhaps, would not be of so prime a quality, and they are not branded, although they may be perfectly good—I mean to say pigs fed on maize or anything like that which produces bacon of a soft or of an oily nature. I may say that nothing passes through our hands unless it is perfectly sound. In anything that we have the slightest suspicion about the medical officer is sent for.

1434. (*Mr. Shaw.*) On the question of compensation you have had a considerable intercourse with farmers. Have you ever heard them express anything on this point, and what is your own view individually on the matter? I may as well tell you for your guidance that, according to one of the last Orders, local authorities have power to grant compensation in this way—half the value for a diseased animal, but not to exceed 40*s.*, and the whole value in case of healthy animals slaughtered, which were in contact, but not to exceed 4*l.* Do you think that amount is sufficient?—I do not think that would be sufficient for a diseased animal.

1435. What would you propose?—I should propose certainly to put double the limit at the least.

1436. That would be giving the whole value in cases of diseased animals?—No, half the value for them.

1437. But that is as it stands at present. It is half the value, but the amount must not exceed 2*l.*?—Of the diseased animal?

1438. Yes. Do you want to make compensation for the animal in contact 8*l.* instead of 4*l.*?—I should say that a pig which is diseased, if it is nearly ready for market, would be worth at the present time something like 5*l.*, and I think half-price for that would not be an unreasonable allowance.

1439. That would be 2*l.* 10*s.*?—Yes.

1440. (*Mr. Wardlaw Ramsay.*) Half for the diseased animals, and the whole for those in contact which have been killed?—Yes.

1441. (*Mr. Shaw.*) What limit would you put on that, if any?—I should put a limit of 5*l.* on the in contact pigs.

1442. In other words, you would put on 20 per cent.?—Yes.

1443. (*Mr. Wardlaw Ramsay.*) Could you tell us whether the recent restrictions as to traffic in regard to foot-and-mouth disease have had any effect upon the pig trade?—I think they have not.

1444. You have not noticed any effect upon the pig trade owing to the foot-and-mouth restrictions?—None whatever.

1445. (*Chairman.*) Or owing to the changed railway rates, because that has been stated as a cause?—Railway rates, as regards pigs, are not higher.

1446. Do you consider that there has been an improvement of late years in the style of pig-sty in regard to building and cleanliness, and matters of that kind?—Yes; I certainly think that the pigs are kept better than they used to be.

1447. I believe it is the case that in a sty with a cemented floor a pig ought to have a board to lie upon?—Yes, undoubtedly he ought.

1448. That is done generally now, where you have stone or cemented floor, is it not?—Yes, I may say that it is a common idea that where pigs are lying on brick they are much more liable to this swine fever than where they are not.

1449. (*Mr Wardlaw Ramsay.*) Bricks are absorbent?—Yes. Stone is in very frequent use.

1450. (*Mr. Shaw.*) Do you not think that as cement is so wonderfully cheap nowadays, that where pigsties are low-lying, local authorities should insist upon having cement floors to them?—I think there would be the greatest possible difficulty in carrying it out. I believe there would be a rebellion.

1451. (*Chairman.*) There is a great deal of pig insurance amongst the smaller people round Wiltshire, is there not?—There is more in our district I think.

1452. Do you think that has had the effect of inducing people who keep pigs to improve their pigsties and to give greater care to them, and so on?—I do not know whether that has had the effect, but I do believe that the general sanitary restrictions and the influence which has been brought to bear have made an improvement in that respect.

[The Witness withdrew.

Adjourned for a short time.

ADMIRAL HENRY CHRISTIAN, called in; and Examined.

Admiral Henry Christian.

1453. (*Chairman.*) I think you are Chief Constable of the County of Gloucester?—I am.

1454. In that capacity you have had to deal with cattle diseases?—I have been Chief Inspector under the Cattle Diseases Acts.

1455. Will you tell us briefly the history of the system that has been pursued since you have been Chief Constable, in regard to swine fever in the County of Gloucester in regard to such questions as compensation, slaughter, and so on?—We commenced slaughtering and paying compensation in the year 1880, and continued until 1886, and a part of 1887, during which we paid for compensation and fees, to inspectors, &c., upwards of 7,000*l.*

1456. Is that for swine fever alone?—Yes; the amount of compensation for swine fever was 3,477*l.* and the expenses were 3,793*l.* I ought to say that out of that 3,793*l.*, 377*l.* 10*s.* were paid to the Corporation of Cheltenham under Section 47 of the Act, in respect of three years prior to 1883, and another sum of 126*l.* 10*s.* for the next three years.

1457. That is up to 1886?—Yes.

1458. Now, what happened in 1886?—In 1886 we stopped compensation, or rather I ought to say at the beginning of 1887, for I see we paid in 1887 114*l.* for compensation. In my report of October 1887 I reported a considerable increase. In July there were 26 outbreaks, August, 13, September, 35. A number of these outbreaks were traced to the pigs sold in markets. The order was then given for markets to be closed except for fat pigs for immediate slaughter. The result was that on January 2nd 1888, I reported a considerable decrease. In September you will remember there were 35, in October there were 19, in November 7, and in December 10.

1459. The conclusion that you draw from that is that the restriction on movement was more effectual than any other cause?—Yes.

1460. Have you continued this policy since?—Last year we had a good deal of swine fever. On the 1st August we closed the markets again except for the sale of fat pigs.

1461. How long were the markets closed under that previous order?—Three months. This is an extract from my Report:—"The Council are aware "that the markets were closed for the sale of swine "on the 1st August, from which date there was a "gradual decline in the number of outbreaks reported "to the police, as follows: July 14, August 12, "September 9, October 5, November 3. The markets "were re-opened on the 1st December, during which "month there were nine outbreaks. None of the

"outbreaks in the month of December can be traced "to pigs bought in a market except one, an outbreak "at Churchdown, among some pigs bought at "Gloucester market on the 19th December. These "pigs had been bought on the 6th of December at "Newent market, and were exposed for sale on the "12th, but were bought in and sent to Gloucester "market on the 19th December." Then I ought to say that since that (I have the return here for this year) we have only had six outbreaks in 1893, and we have not had one for nearly a month. We had in January four outbreaks, and two in February. The last outbreak was on the 12th February at Cirencester.

1462. Have you experienced any difficulty in tracing the history of these cases?—None whatever. The most minute enquiries are made. If the pigs have been bought in another county we write to the police of the district, and they immediately make enquiries and let us know.

1463. What has been, so far as you can classify them, the principal origins of the contamination or disease?—That is impossible to say.

1464. I mean, where do you trace them most?—Locally. My experience is this, that the disease breaks out in the cleanest as well as in the dirtiest pigsty. I know one case at a place called Minchinhampton, right up at the top of the Cotswold Hills, where the farm was most beautifully kept. There was no apparent reason for the disease; we could not find out that even the men employed had been near any market or anything of that sort.

1465. Therefore you are clearly of opinion, and nearly all the evidence we have had points to that direction, that though dirt may keep up the disease it does not create it?—It does not create it so far as the experience I have had goes.

1466. You have not formed to yourself any clear theory as to the origin?—No. It is a most puzzling thing. I cannot make it out. Sometimes there is no reason whatever for the outbreak; at other times we have thought that bad food was the cause. For instance, two or three years ago there was one case where a man bought a lot of bad tinned meats in Bristol and fed his pigs with it. There was an outbreak then, but you cannot say whether that was the real reason of the outbreak.

1467. Some people have even suggested that sometimes too good food causes it?—Of course, I am not an expert, but I suppose it is brought on like any other fever.

1468. You consider that on the whole the disease is fairly analogous to, and may be described as analogous to, if not the same disease as typhoid?—Yes.

1469. You mentioned just now the payment which formerly was made to Cheltenham. Is Cheltenham still an independent jurisdiction?—No, in Gloucestershire the county police are in every town in Gloucestershire—Gloucester, Cheltenham, and Stroud—every town. It is the only county that does so.

1470. Is that by agreement with those towns?—By agreement. We provide them with so many men at so much a year.

1471. There was no change made under the Local Government Act of 1888 with regard to any of those towns was there?—None whatever.

1472. Many of the smaller boroughs as you are aware were merged by the Act?—Yes.

1473. But it did not affect the Gloucestershire boroughs?—That had nothing to do with us at all.

1474. You have at the northern edge of the county some very peculiar boundaries, have you not?—We have very peculiar boundaries. We run in and out with Worcestershire, Herefordshire, and Warwickshire.

1475. You have a great number of detached parts?—Yes.

1476. There are large parts of the county, Chipping Camden for instance, which are very much detached from the county?—Just there it is a peninsula.

1477. Have you used the Act of 1886 at all which enables the transfer of jurisdiction to be made?—We have not.

1478. I thought that one tract there of Blockley, which is part of Worcestershire, had been transferred to you?—No, it has not been transferred to us. There is the Worcestershire Police Station at Blockley. Their petty sessions are held at Camden, the same magistrates who hear the cases for Gloucestershire at Camden hear the Blockley cases.

1479. Would you favour such transfers being made?—I would.

1480. Have you found practical inconvenience from these existing arrangements?—I cannot say that we have, but I know of one case: for instance, near a place called Broadway there is a piece of road between Broadway and Evesham, which runs for about a mile through our country. The complaint was made to me by the farmers at Broadway that if they went along this road a mile—it was close on the borders of Worcestershire—they could not go into Worcestershire again. I wrote to the Chief Constable of the county and asked him to move his Committee to bar that road, to consider that road in Worcestershire because it is a great inconvenience between two market towns. You see Worcestershire has prohibited pigs from Gloucestershire, and these people could go as far as that, but they could not go through this mile, which always appeared to me rather absurd.

1481. You also have some rather peculiar boundaries on the other side, have you not, towards Oxford and Warwick?—Yes, we have, but not so much as we have with Worcestershire on the north side. In Worcestershire, for instance, you can go from a place called Beckford, and you go to a little village in Worcestershire, and then you get into Gloucestershire, and then you get into Worcestershire again, and then you get into Gloucestershire, and that is the only road you can go along.

1482. That must all cause a great deal of unnecessary trouble?—Of course it does, very much.

1483. Do you consider from your experience that on the whole the policy of slaughter though good in itself is useless unless it is accompanied with restrictions of movement?—Just so. My opinion is this: that I do not think the policy of slaughter itself will stop swine fever. I do not think anything will stop swine fever. My opinion is that if you want to put down swine fever to a minimum in any county, or in any two counties where it is prevalent to a considerable degree, if you stop the markets for three months it will go down to a minimum.

1484. Therefore in fact you look upon restriction of movement as the important thing?—Yes.

1485. And slaughter as comparatively secondary?—Yes. Of course I am well aware that it is likely that not so many cases of swine fever are reported to the police when there is no compensation.

1486. Then you attribute the apparent decrease of swine fever all over the country during the last year to that cause amongst others?—I suppose there are cases, but not many. Since I was summoned here I have spoken to several of our superintendents who are very experienced men. I have asked them whether they think there are many cases not reported to them on account of there not being compensation, and the answer is "No." There may be some, but not many, because they have received constantly anonymous letters about so and so's pigs being buried or something of that sort, and inquiries have been made. I may say that we have had twenty-four convictions last year under the Contagious Diseases Animals Act. Twenty-seven were proceeded against, and twenty-four convicted.

1487. Were all those cases in Gloucestershire or were any of them out of the county?—All in Gloucestershire.

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1488. Were those all swine fever cases?—Those were all swine fever cases.

1489. Have you ever followed the cases into other counties and prosecuted, we will say, dealers for having taken out fraudulent licenses or practices of that kind. Have you had to do that?—No, I cannot bring to my recollection anything of that sort. I think we have had one or two convictions for bringing pigs into Tewkesbury market without a license, if I remember right. That is, they are brought in from Worcestershire. Tewkesbury, I must tell you, is just across the river. On two or three occasions I think they brought in pigs to the market, and we have prosecuted them for doing so without a license.

1490. You are aware that a suggestion has been made by public bodies and by societies, that the Board of Agriculture should take over the dealing with this disease in the same manner, in principle, in which it has taken over the dealing with certain classes of cattle disease?—Yes.

1491. Do you consider such a change, which would be a large one, necessary?—I think it would be a good thing to do because you would then have the same procedure all over England, while at present you have different procedures in one county and in another, especially in a county which has towns in it which are not under the same jurisdiction as the county. But that does not occur with us; we have only one jurisdiction.

1492. In the event of the stamping out of swine fever being vested in the Board of Agriculture what part of the administration should be performed by the police or the other officers of the local authority, and what by the central authority, that is by the Board of Agriculture; for example, with whom would the superintendence of the slaughter, the tracing the origin of the outbreak, the valuation of the animals, the disposal of the diseased and healthy carcases the disinfection of premises and so on, rest?—I think the superintendents of police ought to have the power of calling in the veterinary inspectors, who would decide whether the disease is swine fever or not, and also the value of the pig.

1493. What would be the connection between those veterinary inspectors in that case and the Board of Agriculture? Would you have the veterinary inspectors, though local men, appointed by the Board and responsible to them, or would you have them, for example, appointed by the local authority?—I think it would be more workable if they were appointed by the local authority because the local authority would know who were the best men better than the central authority,

1494. But you would leave the Orders, as I understand, restricting movement?—And the closing of markets, &c., entirely to the central authority.

1495. You would throw compensation, would you, on the central funds?—Yes, I think so.

1496. Now, in regard to the amount of compensation, have you anything to say to us?—That is a very difficult subject. For instance, I know of a case in the Forest of Dean where I think we paid 400*l.* to one man, or 300*l.* and something. This man lives in the Forest of Dean and he bought a lot of pigs in Gloucester Market which had the disease amongst them; he turned them out into the forest—they are allowed to turn out into that large forest—and the whole of these animals or a great many of them got diseased; he claimed compensation and he was paid a very large sum of money. He must have made a lot of money by that because when he bought those pigs probably he got them for 10*s.* apiece about a couple of months before, and I think he was paid more than 10*s.* apiece for them.

1497. Most of the evidence that we have had has rather been in the direction of increasing the amount, but you rather think it sometimes might be necessary to decrease it?—I rather think it is; in that case especially.

1498. Do you know what the scale is now?—No, I do not.

1499. The present scale is half value in the case of the diseased animal, but not exceeding 40*s.* and a limit of 4*l.* in the case of an in-contact animal?—I think that is fair enough.

1500. Therefore, you do not suggest any alteration in the scale of compensation?—No, I do not.

1501. Now, supposing the Board of Agriculture did not take over dealing with the disease, what would you suggest from your experience, of the advantage of one authority, in dealing with the minor jurisdictions by law all over the country?—I think in every county there ought to be a central authority or else the small towns in a county would come into collision with them. For instance, with Gloucester and with Cheltenham, they are both very large towns; when we are going to close the markets the mayors of Cheltenham and Gloucester are invited to attend, and we tell them what we are going to do, and they always acquiesce; in fact if they did not we could blockade them. They have been told that. Of course, they cannot move anything in or out. They are surrounded by us.

1502. I suppose if there was a line of railway and there was some neigbouring county which had not got regulations out they could move off by rail owing to the transit clauses, could they not?—Not if the county made an Order that they were not to come in through the county.

1503. Would not the transit clauses of the Order apply?—It might be that they might go right away out of us, but they could not land them in our county.

1504. But they could bring them into the city through your county?—If such a thing occurred they could bring them through and land them inside their jurisdiction, but they could not land them in our jurisdiction. They could not go twenty yards away from the market.

1505. Is it not an inconvenient thing; is it, in fact, not a source of risk, that such a jurisdiction can exist inside the limits of the county into which pigs can be brought, and from which contagion might escape?—Exactly; there would be if they did not work with us.

1506. Have you, for example, ever heard that the city of Bedford is a great source of trouble to the county of Bedford in that manner?—No, I have not heard. We have no trouble whatever with our boroughs.

1507. You admit that the case might arise?—It might arise. I can see that it can arise, of course.

1508. (*Professor Brown.*) You have said that you found the restriction on movement and the stoppage of markets very effectual?—Very.

1509. Would you think it desirable to add to those restrictions slaughter of diseased and in-contact animals?—No.

1510. Do you mean that you would allow the diseased animals to live or die?—I would slaughter the diseased or badly diseased animals, but I see no necessity for slaughtering the ones that are not diseased, because, as my experience goes, 20 per cent. of them recover.

1511. Are you aware that a recovered animal is capable of conveying the infection for a long time through the agency of the manure?—After the animals are declared free of disease in our county; I think it is fifty-six days before it is declared free.

1512. Then, on that system, of course, it involves a long continuance of the restriction?—Yes, it does.

1513. Whereas, if you slaughter the lot out at once it would not be so?—Of course there is not the slightest doubt when the pigs are attacked with swine fever if you slaughter the lot of them there is very much less chance of the disease spreading than

if you let them live. There is no doubt about that.

1514. Then I suppose I may take it that when you say you would not slaughter it would be from motives of economy?—Yes, from motives of economy, as you would see.

1515. That consideration would not quite weigh so much when the whole country had to pay the costs?—No.

1516. It would be a matter of less importance?—I think there is no doubt if you slaughter every animal that is attacked, and the animals in contact with it, that there would be less chance of the disease spreading, but in the seven years' experience we have had in Gloucestershire slaughtering has had no effect.

1517. That is slaughter alone without restrictions on markets?—Yes.

1518. I think you said that you had no reports for something like a month?—The 12th February was the last.

1519. And that, at any rate, the disease has decreased in your district? — Generally it has decreased. That was since the closing of the markets.

1520. Do you think that the withholding of compensation has led, to any extent, to the concealment of disease?—No; as I said before, I do not think there is very much concealment.

1521. Do you think that it is likely, as a rule, to lead to concealment of disease?—I think it is very likely that a man who finds his pig ailing would knock him on the head and put him in his dung heap. It saves him a lot of trouble. You see the danger in the markets is this: That when a man has some pigs and they begin to ail, he sends them to market to get rid of them. Of course if they have swine fever they give it to all those that are near them; there is no doubt about that.

1522. In your county you have the enormous advantage of providing police for all the boroughs?—Yes, we have.

1523. So that they cannot send the animals through your county into boroughs without your knowledge?—No, not without our knowledge.

1524. You say, I think, that during last year there were twenty-seven summonses?—Yes, and twenty-four convictions.

1525. Does that not indicate, considering how wonderfully well your district is watched by the police, that there is a good deal of concealment?—Those convictions are not all for concealment. There are other offences. I think I might tell you that our regulations about slaughtering are these: That every pig has to be marked with a red "M"; when those pigs are sold there is a policeman who takes a list of them and to what place they are consigned. A letter is written to the police of the district to which the pigs are consigned, and the policeman of that district sees them killed. So as long as they go to our own county we see that every pig is killed. If they go outside our county, notice is sent to that county to say that so many pigs have been consigned from so and so, and they ought to be killed in three days.

1526. You do not happen to know what proportion of the cases were for concealment of the disease?—No, I had not time to go through all the returns.

1527. I judge from what you said previously that the probabilities are that only a small number of them would be for concealment?—I suppose some would be so, and a good many for not reporting. I was asking one of our most experienced superintendents the day before yesterday, and he told me, "I think, "from what I know, if John So-and-So has a pig and "he knocks him on the head, and his neighbour knows "of it, probably the superintendent of police will get "an anonymous letter about it." We have found the pigs buried, and they have been dug up, and we have found that they have had swine fever.

1528. You remarked that in consequence of your police arrangements you have not the difficulty which is experienced in other counties with regard to separate jurisdiction?—No, we have not.

1529. The jurisdictions, of course, in some countries are very numerous?—We know nothing about that.

1530. Is it not the case that if a central authority undertakes the administration of the law, the whole of that inconvenience ceases all over the country?—Just so.

1531. For that reason would you advocate central action?—Central action in giving the orders.

1532. But you do not mean that the local authority should be entirely superseded?—No, certainly not.

1533. With your experience you would hardly suggest that the Board of Agriculture could carry out the work all over the country without the aid of the local authority?—Certainly not. It is a very large and very troublesome business.

1534. (*Sir Jacob Wilson.*) What I gather from your replies to Professor Brown points to this. I take it that in your mind the most probable means of exterminating the disease from this country would be a system of slaughter with compensation combined with restriction of movement?—Yes.

1535. Those would be the three means you would suggest?—Yes.

1536. Even with all those restrictions do I gather from you that you have no hope of absolutely extinguishing the disease?—Certainly.

1537. You do not expect it?—I do not think so. That is forced upon me by what I hear about it.

1538. Are you aware that the three conditions which I have named and to which you subscribe have never been in existence up to this time; I mean all three combined?—Not all the three combined. In the beginning of 1887 when we stopped slaughter we stopped the markets and there was an immediate decrease.

1539. Then am I to understand that you consider that swine fever would be more difficult to exterminate than either pleuro-pneumonia or foot-and-mouth disease in cattle?—I think so.

1540. You told us I think that you had known disease breaking out both in clean and in dirty pigsties?—Yes I have.

1541. Does that point to the probability of the virus being communicated by mediate contagion?—It is either that, or swine fever is a disease which is generated in a pig without contact. That I cannot give an opinion upon.

1542. From your large experience have you reason to think that it has a spontaneous origin?—I have reason to think so in several cases. Even after the most minute enquiries we have never been able to trace that anybody connected with the pigs has been in contact with diseased animals.

1543. I notice that you say that you have had no difficulty in tracing the origin of the disease?—I think I should hardly have said that because it is not the case. We have no difficulty in finding out where the animals come from and their history. I ought to correct it in that way.

1544. Have you had any recent outbreaks in Gloucestershire?—No. The last outbreak was at a little village called Ampney St. Peter about four miles from Cirencester. There were two pigs on the premises and one was attacked. That was on the 12th February, and I do not know the result. It is still an infected place.

1545. Then you are not in a position to say how that is supposed to have arisen?—It cannot be accounted for. I have here all the reasons for every outbreak since October.

1546. Does the same remark apply to many cases that you have had?—Yes. We have had 23 cases of outbreak since the 10th of last October, and 18 of those cases we cannot account for.

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1547. Are you satisfied in your own mind that those have been established cases of swine fever?—Yes. The superintendents are not allowed to call in a veterinary inspector except where there is any doubt. When they go and there is a dead pig, of course if they see the pustules that is enough, but if the owner of the diseased pig says "I would sooner have a veterinary inspector," a veterinary inspector is immediately called in, at the county's expense. You can always have a veterinary inspector if you like.

1548. Is it your experience that your police inspectors are able to detect the disease from external appearances without difficulty?—They cannot detect it unless they cut a pig open.

1549. I am speaking of the living animal?—No, they cannot do it then.

1550. Before the owner calls in a veterinary inspector the police have to be informed?—Yes. Generally a pig dies and then the superintendent goes and he has it opened. If he sees the pustules he is pretty well satisfied. Then if the owner of the pig says "No, I must have another opinion," he calls in the veterinary inspector of the district.

1551. Is it universal that no action is taken unless a pig dies?—No. For instance, if a man says "My pigs are ill," and there is no pig that has died, then the superintendent calls in a veterinary inspector and of course goes by his opinion.

1552. Are pigs kept in any great numbers in given spots in Gloucestershire?—Yes, especially in the district of Stroud. The Stroud valley is a very thickly populated valley with a large number of cloth workers and people who all keep pigs. The same may be said of the colliers in the Forest of Dean. We have had more disease in the Stroud district than in any other.

1553. Where are those pigs chiefly purchased? In the neighbourhood?—In the neighbourhood and in the neighbouring markets.

1554. Are markets in your opinion a general medium of disseminating the disease?—Yes, I think they are.

1555. Do you consider that small pig dealers are very apt to carry disease about?—Very much so.

1556. Would you think it might have a deterrent effect if pig dealers were compelled to be licensed?—Yes I think it would.

1557. The boroughs in Gloucestershire I believe are Bristol, Cheltenham, and Gloucester?—Yes.

1558. Are Cheltenham and Gloucester under your administration?—Yes, and a large part of the suburbs of Bristol; a population of nearly 200,000.

1559. Bristol being a county borough itself?—It is a borough of itself with which we have nothing o do.

1560. It is an important seaport?—Very.

1561. At which I presume a large number of pigs arrive from Ireland?—Yes, a very large number of pigs and cattle.

1562. From Bristol how are those pigs distributed throughout the country?—A large number of them go by rail to the markets all over England.

1563. Have you any reason to believe that the disease is disseminated from Bristol?—No, I cannot say that I have any reason to believe that. In the time of the foot-and-mouth disease I was requested by the Court of Quarter Sessions to go down there and I inspected the cattle ships on their arrival and made a report about them. No doubt the cattle arriving in them are most tremendously crowded and I should think in a state very likely to create disease if they were kept there any time; however the voyage is very short.

1564. Will you tell the Committee what are the principal markets in Gloucestershire where pigs are sold?—I cannot tell you all, but I will begin down Bristol way. There is Charfield, Yate, Berkeley, Nailsworth, Thornbury, Stroud, Gloucester, which is a very large market, Cheltenham, Tewkesbury, Camden, Stowe, which is a very large fair.

1565. Are those markets kept under strict surveillance?—Within three days of a market being held the police of the district send me a report that the market has been disinfected in accordance with the regulations. They see that done.

1566. Does it form part of the regulations of the local authorities that these markets shall be properly paved or cemented?—Yes it is, and I think all are properly done. At the same time I should like to make a remark about those markets. It seems that the inspectors pass markets paved with bricks. I do not myself think that that is sufficient. I think that the floor of a market ought to be perfectly smooth. You see the bricks have mortar between them; that mortar wears out and it forms into little gutters between each brick and it is almost impossible to disinfect that thoroughly.

1567. The neighbourhood of Nailsworth has had a good deal of disease about it for some time, has it not?—Yes.

1568. Recently, I believe, Nailsworth Market has been paved?—Yes.

1569. Since that has there been any difference shown in the amount of disease in that district?—We have had no disease lately from Nailsworth.

1570. Do you attribute the diminished amount of disease to precautions taken in the market?—I think so. The market of Nailsworth was very bad indeed before it was paved; it was simply a green field; of course it is perfectly impossible to disinfect a green field, and the whole place was trodden down into a regular quagmire.

1571. Is it your opinion that the farmers of Gloucestershire regard swine fever as a matter of importance?—Of very great importance.

1572. You think they do?—They certainly do.

1573. Is there any trade, do you know, between Gloucestershire and Bedford?—No; not that I am aware of.

1574. Have you ever known a case in which compensation has been paid to a farmer more than once?—No, I do not remember one. You see it is a long time ago; 1886.

1575. I have not said when. Are you thinking of the Forest of Dean case?—Yes.

1576. I will come to that presently; I only want a general answer first. You have not known of such a case?—No.

1577. Do you not think the fact of compensation being paid is a temptation for the introduction of disease for the sake of getting the compensation?—I hardly think that.

1578. Would you be surprised to know that such has been the case with regard to pleuro-pneumonia? I am not surprised at anything. Of course the thing might happen.

1579. (*Mr. Shaw.*) With reference to the case you mentioned as regards the hogs that are fed upon waste tinned meats, was that identified really by the veterinary surgeon or by the medical officer as being genuine swine fever?—Yes.

1580. It was?—Yes; but whether it was from tinned meats or not, I do not know. It struck me as a horrible thing to do to feed swine on that stuff.

1581. With regard to dealers, you admit that it would be better that dealers' places of business should be registered?—Yes.

1582. And probably inspected by the public inspector?—Yes.

1583. As regards dealers' carts, do you think it is not possible that they may be the means of carrying infection from place to place?—It is very likely, indeed, that they may be.

1584. Gentlemen of the Veterinary Department have told us that the wood of a dealer's cart is very

liable to carry infection?—I should think it is very likely.

1585. Are there dealers' carts in existence in your county?—Yes.

1586. As regards the disinfection of the railroad trucks, complaints have reached us that the railway trucks are very carelessly disinfected; so much so that the lime is frequently unslaked, so that when the urine of the hogs goes on it it causes severe damage to the animals; have you had any experience of that, any complaints of that sort?—No complaints have reached me upon that matter.

1587. Are there boar stations in your county. Is Gloucestershire a breeding county?—Yes.

1588. Does it not appear to you to be useful if the boar, and not alone the boar but his surroundings, were under inspection, and liable to inspection also?—I think a boar is very apt to take the disease.

1589. Would you recommend that boars should be under inspection too?—Yes.

1590. You said that you thought it would be wise if the local body had the appointment of inspectors?—Yes; I think so.

1591. Would you not have them under the approval of the superior body, that is, subject to the approval of the Board of Agriculture?—I think the local bodies would have more knowledge of the local men.

1592. True; but what I mean to say is, would it not be better to have them subject to the approval of the superior authority?—Yes; I think it would be so.

1593. Let the local authorities suggest the man, and let him be approved, upon inquiry, by the superior body?—Yes.

1594. You said that some of the pig farmers, rather than bury a pig, would put him in the dung heap?—Yes; I think that is very likely.

1595. Do you not think that is a most reprehensible practice. Have you ever heard of a pig being dug out of the dung heap by dogs, and his flesh carried all over the country for miles and miles? No, I have not.

1596. Are you aware that the disease can be carried in this way: Is it not possible that some cases which cannot be traced, I speak of this with the greatest respect because I am not saying for a moment that you did not do all that was possible to find out these cases, but is there not first an extreme possibility that the infection may have been carried in such a way as this in the cases that you have not been able to trace?—Very likely.

1597. The point I want to make is this: You say it is impossible to trace exactly where these cases have got infected, and that also the disease must have some sort of spontaneous origin?—Yes.

1598. I am trying to argue a little bit the other way, that there really is a basis for all this?—Yes; I should not wonder if there was, but there it is; I am merely telling you what my experience is.

1599. Do you think that reasonable compensation would have the effect of doing away with this practice of burying pigs surreptitiously?—No doubt about it.

1600. Do you proceed against a man who is discovered burying a pig without having reported it to the public authorities?—Yes, certainly; and that is the cause of some of these convictions.

1601. One of the difficulties, as it seems to me, if you were to close these markets, would be how are these people, say at Stroud, where there are a number of colliers, mill-workers, who feed pigs occasionally, to get stores for feeding?—Of course there is no doubt that the closing of the market imposes a very great hardship, and they have to suffer. In Gloucestershire there is a company called Hillier's Bacon Company, which kills an enormous number of pigs. Their pigs come straight from all parts of England, and are immediately slaughtered, and when our markets were closed we gave them a general license to get pigs from anywhere else, because we knew they would be slaughtered.

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1602. What is the exact position of Hillier's Bacon Company?—It is near Nailsworth.

1603. But what I have mentioned to you is one of the difficulties in the matter, is it not?—Yes.

1604. I asked you the question for this reason, that I was desirous of getting out the fact that a certain portion of the community might feel the effect of the closing of these markets, and that it was not a matter to be very lightly done?—Certainly, there is no doubt about that.

1605. (*Professor Brown.*) You seem to think that whatever is done we shall not get rid of swine fever?—That is my experience. Whether a combination of slaughtering and closing at the same time would do it I do not know—of course I have had no experience of that.

1606. Of course you are aware that we managed to stamp out three outbreaks of cattle plague, which is a very difficult disease to deal with?—Yes, I am quite aware of it.

1607. And that we have apparently got rid of pleuro-pneumonia?—Yes. I have had experience of cattle plague.

1608. (*Mr. Shaw.*) Of rinderpest do you mean?—Yes.

1609. (*Professor Brown.*) Is there anything which occurs to you which would make you entertain the impression that swine fever is so peculiar among diseases that it stands in a different category?—Merely my experience of not being able to trace it. I have no other knowledge than that. A great deal of pains have been taken to find out the origin of the disease.

1610. Does that not rather suggest that you have not quite made up your mind that it is a truly contagious disease?—I have not.

1611. Starting with the assumption that it is a contagious disease and nothing else, it follows, does it not, that it must be introduced from without?—Yes, I suppose so.

1612. The fact of your not being able to trace it does not necessarily show that it is not to be traced?—No, certainly not.

1613. How do you get notice generally—from the person owning the pig or in charge of it?—From the person owning the pig, and then the police very often hear that so-and-so's pigs are ailing, or something of that sort.

1614. Then the police inform the inspector, I suppose?—The superintendent immediately goes there and inspects the pigs, and as I said before, if none of those pigs are dead he calls in a veterinary inspector; but if there is a dead pig he opens it and he can tell pretty well.

1615. If the pigs are alive he cannot decide, and he calls in a veterinary inspector?—He cannot declare it himself; he has not sufficient knowledge for that.

1616. (*Sir Jacob Wilson.*) Do you think that any further special inducement might be offered to a constable which might induce him to look more closely into the matter?—No, and I object to anything of that sort.

1617. I asked the question because it has been suggested before this Committee?—That they ought to be rewarded?

1618. Yes, that is why I asked you?—I object to that entirely; it would strike at the root of all discipline.

1619. In the event of a serious outbreak of swine fever occurring in your district, have you any suggestion to offer for the institution of a form of restrictions other than those which at present exist?—No, I have not.

1620. (*Professor Brown.*) With reference to what

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you said about market you do not like the brick flooring ?—No, I do not.

1621. The objection which you gave was a very good one, but you spoke of the necessity of having floors which are smooth ?—Yes.

1622. Have you any material which you would recommend ?—I should recommend the asphalte; asphalte made with ridges I have often thought of.

1623. You are aware, of course, that the cattlemen object to that because they say the beasts slip ?—Exactly, but I think there would be no difficulty in making asphalte with narrow ridges.

1624. (*Sir Jacob Wilson.*) Or cement ?—Yes.

1625. (*Professor Brown.*) You are probably aware that the Act gives no power whatever in reference to the construction ?—No, I am not aware of that.

1626. All that we can insist upon is that there shall be some flooring which can be washed with water ?—Before a market is opened the inspector has to certify that it is fit to be opened. Could he not object to it in that way ?

1627. I do not know who does that. It does not come under the jurisdiction of the Board of Agriculture. I was not aware that some of the Acts say that they have to certify that the market is fit. I presume that is under the Local Acts ?—No; a Government Inspector came down a little time ago and inspected Berkeley market, also Yate market, before they could be opened—and Nailsworth market too.

1628. That was probably one of our inspectors ?—Yes, it was one of your inspectors.

1629. All that he would be able to insist upon would be that the floor should be capable of being washed with water, and if they chose to have bricks he is bound to be satisfied with them ?—I had the pleasure of seeing one of your inspectors the other day when he came down—I forget his name—he was a naval man, and I pointed out to him the objection, especially in a market like Gloucester where they do everything they can; but still there it is, if you go through the markets you see all these holes between the bricks.

1630. (*The Chairman.*) Do you think that more might be done in the way of insisting on healthy conditions in pigsties, especially in small towns ?—I do not know how you would carry it out, because a pig is a very dirty animal, and the manure is very valuable.

1631. I meant in regard to such questions as the position and the size of the pig-sties. We have had evidence given to us that in a great number of cases pig-sties are so cribbed, cabined, and confined, so to speak, that they cannot be cleaned out ?—They cannot. Some regulation might be made that a pig-sty should be of a certain size, and that it should be properly drained, which is more important still.

1632. Do you think there would be any difficulty, as has been suggested by other witnesses, in respect to the question of giving the County Councils some power to see that these Orders are carried out throughout the county ?—Just so; there would be no difficulty about that.

1633. You do not think that local opinion would resist such a step very much ?—No, I do not think it would.

1634. (*Sir Jacob Wilson.*) Have you ever in your experience had occasion to absolutely remove a pig-sty ?—No; we would not have any power to do so.

[The Witness withdrew.

COLONEL JOHN HAMERSLEY, called; and Examined.

Colonel John Hamersley.

1635. (*Chairman.*) You are Chief Constable of the County of Cheshire, are you not ?—Yes.

1636. In that capacity you have naturally had to deal with the whole question of swine fever ?—Yes.

1637. Will you give us briefly the history of the policy which has been pursued during the last two years by your county in regard to this question, with especial reference to the questions of movement, slaughter, and compensation ?—As regards movement, I suppose you mean, first of all, as regards the places which have become infected, or the animals therefrom. When the places become infected, the affected animals are always slaughtered, but those which have been in contact are not slaughtered.

1638. You slaughter infected animals, but you do not slaughter in-contact animals ?—That is so.

1639. That has been your policy for some time past ?—That has been our policy, I may say, for the last 12 years.

1640. And is now ?—And is now. The question of slaughtering animals which have been in contact with diseased animals has been considered, but I have not recommended it to the county authorities for this reason: that some other local authorities do not slaughter at all the affected animals. There they are, and there they are allowed to be, and they are not slaughtered. I have felt in such cases as pleuro-pneumonia that it was no use for the county authority of Chester to take strong steps for slaughtering animals when other and neighbouring local authorities allowed the disease to go unchecked to a certain extent. There would be no object in doing so. That is what I felt in the case of pleuro-pneumonia. Where animals are slaughtered in Cheshire the county of Chester was not reaping that benefit which it should do by the outlay of the money of the ratepayers, when, perhaps, our neighbouring authorities never took any notice beyond being obliged to slaughter diseased animals. Therefore I did not recommend it. But there is a feeling amongst some of the leading farmers when the case has been brought up that all animals in contact with diseased animals should be slaughtered. Then as regards the movement of animals from infected places, these infected places are strictly looked after, and pigs which have been in contact are, of course, not allowed to be removed from the infected premises until the place has been declared free of the disease, or rather until there has been a cessation of the disease for 28 days. Then after that the restrictions are taken off, and the pigs are permitted to be removed whenever the owner may think proper.

1641. You have alluded to the difficulty arising with reference to slaughter from the different policy that may be pursued by your neighbours, by which, I suppose, you mean neighbouring counties ?—I would say, perhaps, rather neighbouring boroughs, although I do know that neighbouring counties have not slaughtered. I think very often you find the difficulty is to get the borough authorities to move, they have not got the same interests in agricultural matters that the county authorities have.

1642. What are the boroughs in your county of Chester ?—Chester, of course, has a separate authority; then we have Crewe, Birkenhead, Stockport is on our borders, Macclesfield, and Hyde. Those are all that I can call to memory just at present.

1643. We will take it from you that there are several boroughs with independent jurisdictions ?—Yes.

1644. You have not succeeded in making an agreement with them, as some counties have, to practically transfer their authority to you ?—Not in the case of swine fever, but they have followed us in some cases, when we have made regulations with reference to foot-and-mouth disease. There is the very greatest

difficulty, I think, where you have so many authorities on one matter like that in finding actual uniformity of action. If there is suggested and supposed uniformity of action, there are so many cases where it is not actually so. Take, for instance, boroughs : as a rule, the police in boroughs do not look after these Contagious Diseases (Animals) Acts ; that is done chiefly by what they call the city or town surveyor ; he is only one individual, and, of course, he cannot do it ; he has not got the power of supervision which you have when you have it done by an organised and strong body such as the police.

1645. You would therefore favour in any case any measure which would tend to diminish the number of these separate jurisdictions ?—Yes.

1646. Is there not on the borders of Cheshire and Shropshire and Wales, near where the three counties touch one another, a very peculiar boundary which they call the Maelor Hundred ?—Yes.

1647. Is that not a very great source of trouble ?—We have had considerable difficulty about it.

1648. Perhaps you will just describe that to the Committee ; I happen to know it, having been a Boundary Commissioner ?—It is really a small isolated portion of Flintshire, which is bounded by Denbighshire, Shropshire, and Cheshire. It is really a portion of Flintshire which is absolutely detached. We have had considerable difficulty with pigs being brought into there, and brought out again.

1649. Is it not the case that if it were not for this peculiar district the English counties would have a river boundary which could easily be watched, while as it is any diseased cattle, or pigs, or anything else, from Wales can get over the river Dee, and from there be distributed over the county ?—Part of the boundary is simply an imaginary line. Not only as regards that part of Flintshire and Cheshire, but as regards other parts of Cheshire, there is simply an imaginary line, or a small rivulet, or some brook, which is not like a large river where there are bridges and so forth.

1650. Shropshire would otherwise have a most excellent boundary in the river Dee if that piece were not there ?—Not Shropshire ; Denbighshire and Flintshire would ; Denbighshire is really where it runs into.

1651. But the Maelor Hundred projects into Shropshire, does it not ?—Yes, it wedges in between Shropshire and Cheshire.

1652. Therefore, if this part were transferred to Shropshire, Shropshire would have an excellent boundary, because it would have a river boundary, would it not ?—No, I do not think Shropshire would.

1653. The river would then be the boundary between Denbighshire and Shropshire ?—Yes, if that small portion of the Hundred of Maelor were added to Shropshire.

1654. That is exactly what I mean, there would only then be one bridge by which any cattle could come across ?—My local knowledge is not sufficient for me to answer that, but I rather think it would be so. I rather think it would be what they call the Bangor bridge ; the Bangor bridge is the next one to the Farndon bridge on that river. Farndon bridge is in Cheshire. I think it is so, but I will not be absolutely certain.

1655. Will you give us the benefit of your experience in regard to the causes of the disease ?—I think it is rather a difficult question as regards the causes of the disease. It is an open matter, rather, I think. Amongst many agriculturists, and amongst people who deal considerably with pigs, and have had long experience with the animal, it is thought that it arises from giving pigs heating food, and so on, and also from unhealthy surroundings such as the sties, which they are confined in, being in a filthy condition, and, indeed, quite incapable of being in any but a filthy condition, because there is no drainage of any sort. It has been said, and I believe it is generally supposed by the veterinary science, that there must be some previous cause for the outbreak of swine fever, but I do not think that is altogether an accepted thing amongst agriculturists. As to the actual cause I think it is difficult to state it. I think we are in rather a hazy condition in that way, and I do not think there is anything certain about it myself. I say that because very many cases have come under one's notice where swine fever has broken out on a farm, and there is no possible way, however diligently one may have inquired into it, of finding that there is any actual cause for its breaking out, except that it broke out spontaneously. That is the only thing that I can go on, one's general observation in the matter. We have had in Cheshire, from the 1st January 1891 to the 28th February 1893, 162 outbreaks of swine fever, and out of those 162 outbreaks 42 have been on premises where the animals have been bred. There has been no cause shown, so far as one could ascertain, why the disease should have been brought on to those premises, or that it ever has been brought on to those premises in any way from outside the premises themselves. Therefore, I say that that rather leads me to the view that it is not altogether absolutely certain yet that the disease does not break out spontaneously.

1656. But you consider that, assuming the disease to break out spontaneously, it is kept up by filthy conditions ?—I think so. Of course it is not only kept up in that way. Perhaps you slay the animal which is diseased, but you do not slay the animals which are in contact with it, and they may go out to an auction, or a sale, or market, and the disease may be in them, and incubating in some form, and then they become mixed with others, and so it goes throughout the country. I think that is quite a fruitful source of disease.

1657. Do you consider that it is possible that the carts of the dealers may carry infection about ?—Yes, I think so. Some regulations, I forget the date, which were issued by the Board of Agriculture some short time ago, authorised the local authorities to make certain regulations in reference to that matter. In Cheshire we applied these regulations. We made some regulations which directed that all dealers should have their vans, carts, and vehicles cleansed at such time as the local inspector might think proper that they should be cleansed, especially after attending fairs or markets, and so on.

1658. That is under what is called the Markets and Fairs Order, I think ?—It came out on the 2nd July 1888.

1659. Have you succeeded in carrying that out fairly effectually ?—Yes, wherever there is the slightest suspicion that it is not being done, or that the carts are dirty, directions are immediately sent out, and the matter is looked up by the inspector so far as Cheshire goes.

1660. On this question of cleanliness and disinfection, have you considered at all the possibility of more stringent measures being taken, quite irrespective of an actual outbreak, to prevent filthy conditions growing up in pigsties, especially in small towns, where very often there are crowded pigsties in places where it is really impossible to deal with them ?—No, I have not given that specially my attention. I think it would be a very difficult matter to regulate it, because I do not know of any law that could prevent it beyond the ordinary sanitary laws which apply to the particular districts. I do not know that there is any law by which you could prevent it at all at present.

1661. I am asking you whether you consider that it would be desirable to strengthen the hands of, let us say, the county authority, possibly, by giving it a sort of power of supervision to prevent the neglect of

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the smaller authorities, or for example, compelling every pig keeper to take out a licence which would compel his pigsty to be of a certain size and to be kept clean, and so on, as a condition of renewal ?—I do not think you could fairly interfere with the pig keepers. I think it would be rather an interference with the liberty of the subject, if I might say so.

1662. Do you think the liberty of the subject extends to keeping pigs in such a filthy condition that they can cause disease to other people ?—No, I do not think they ought to be allowed to keep them so. Then I think it becomes a matter of compensation. If you find that they keep their sties in such a filthy condition that they are likely to create the disease then it becomes a matter whether you can give them compensation.

1663. You mean if you destroy the premises ?—If you destroy the pigs if swine fever broke out.

1664. Might it not be better in a case of that kind gradually to enforce a system under which these filthy conditions would not exist at all, or in which they could be minimised ?—It would be advantageous undoubtedly if you could do it.

1665. You are aware, for example, that now local authorities have power to draw up bye-laws in regard to these matters, only they must be strictly conditioned by consideration of human health ?—Quite so.

1666. Do you think that a step further might be taken, and that you might make it a condition that the health of the animals concerned should be regarded as a matter of public policy ?—Yes, undoubtedly, for the purpose of eradicating this disease from the country.

1667. That is what I mean ?—It would be an advantage, but it would be a difficult thing to do, I think

1668. Do you think it might be possible to appoint a county inspector, a medical officer, who would go round and see that the local officers of urban and rural sanitary authorities were doing their duty in the matter, because that is what it really comes to ?—It would be advantageous undoubtedly for the purpose of eradicating this disease, but as I said before it would be a somewhat difficult thing to do. You might do it, of course, in the same way as the Milk Shop Orders used to be done.

1669. That is what I had in my mind ?—We used to have to inspect the cowsheds to see that there was proper ventilation there, and indeed that is the order now as regards cowsheds. That is now carried out by the local sanitary authority, whereas formerly it used to be done, in the case of Cheshire, by the police, that might be extended as you say to the pigs by requiring that there must be certain conditions observed in respect to them. In the same way the Board of Agriculture some years ago brought out Orders with reference to having all sale yards and so forth paved so that they could be thoroughly cleansed and disinfected. Of course that might be with advantage carried further if it could be, and applied to pigsties in small towns, in any place in fact.

1670. I daresay you are aware that owing to the matter having been left entirely in the hands of the minor authorities there are many districts in England where practically no notice has been taken of the Dairies and Milkshops Order ?—I think perhaps it is not so strictly carried out as it used to be. The officers of sanitary authorities in small districts are local people, and of course it becomes rather difficult for them to carry out the regulations stringently.

1671. That is the very reason why I am asking you as to whether it might not be desirable to give county officers power to come in over their heads ?—Some officer should have it, a county or other officer. That is rather what I pointed at; so far as my feeling or opinion goes in the matter I think there ought to be distinct supervision of the officers of local authorities in this matter of swine fever, in the same way as there was in the matter of pleuro-pneumonia.

1672. As there is, you mean ?—Yes. We have seen the excellent effect it has had in the case of pleuro-pneumonia, and I think if it could be carried on in the same way with swine fever you might have a greater chance of getting rid of the disease.

1673. Now I would just like to ask you to give us a rather more detailed answer on this point: If, in the case of swine fever, the Board of Agriculture, in principle, was given the same power which it now has in regard to cattle disease and pleuro-pneumonia, would you propose, in that case, to leave no duties at all practically to the local authority, or would you leave certain duties to local inspectors, and simply alter the authority with regard to the issue of movement orders and the fund on which compensation was charged ?—I should leave the actual compensation as it is. I see no reason why you should alter the matter of compensation or valuation. I think all that might be carried on by the local authority as it is at present. But there ought to be some supervision over the local authorities to see that the regulations are uniformly carried out throughout the country. Where you have certain regulations brought out, as I have already said, the isolated endeavours of certain authorities to eradicate this disease are very often useless, because the neighbouring local authority takes but very little notice of the whole thing.

1674. And then from the district of that local authority infected pigs come in ?—Just so. Then there is another thing. I think the tracing of any outbreak of disease to its origin is a most difficult thing for a local authority to do, whereas if you had a generally supervising power they would be able to do it more effectually in the same way as they have done it in pleuro-pneumonia. I have got a case now—the last outbreak we had in Cheshire, if it be true what we have been told—and it has taken rather more than a fortnight to find it out. The pigs amongst whom the disease broke out went through Oswestry; they were in a fair at Oswestry, and then, no doubt, they absolutely were in contact with other pigs there. Those pigs were previously at Shrewsbury market, and they were brought to Shrewsbury market from two farmers in Shropshire. If it be true what the dealers have told us, there you have traced pigs which the person in Cheshire who bought them said had never been well since she had them—about a fortnight. On the 17th January these pigs went through the Shrewsbury market, and on the 24th January they went through the Oswestry market—that is the way you get the disease spread. I think we must all recognise how much more difficult it is to look after pigs than it is to look after cattle. They are a much smaller animal. They are put in a bag and carried away, and so on, and the difficulties of working out the disease will certainly be very much greater with them.

1675. With regard to ascertaining whether the disease was or was not swine fever, are there not some material distinctions between it and pleuro-pneumonia and cattle disease—I mean in regard to the powers that you can give to the Board of Agriculture ?—No; if there is any suspicion of it, I think you can have the animals killed at once for the purpose of finding out if it is swine fever.

1676. Would there not be risk in sending portions of the animal to London, as is done in the case of the other diseases ?—I do not think there would be any more risk in sending portions of the animal up to London than there was in pleuro-pneumonia, because I fancy it is only in a small portion of the animal—the intestines of the animal—where the signs of the disease, the little ulcers, occur on a certain part of the internals.

1677. You do not think there would be any serious risk if it were sent up in jars or in little cases ?—No, I do not see why it should be so more than in pleuro.

1678. (*Professor Brown.*) You say that you do not

slaughter the contact pigs because the other local authorities about you take very few steps of any kind ?—I will not go so far as to say very few steps of any kind. They do not slaughter even in some cases the diseased animals ; in fact, I have tried to find out, as far as I possibly can, what counties do not slaughter pigs, and in the case of those counties where there is any swine fever I have always recommended the local authority to prohibit the movement of pigs from those counties into Cheshire, which is generally done.

1679. Would you recommend the slaughter of contact animals, supposing that the whole work were done by the central authority ?—Yes, I would. If you desire to really eradicate the disease in the country I certainly should.

1680. That, of course, would be the chief object of the central authority undertaking the work ?—Yes, that would.

1681. I understood you to say that you think there is some doubt about the contagious character of swine fever, and the doubt in your mind seems to rest on the fact that you cannot, in many cases, trace the origin of the disease ?—Yes.

1682. Does that not apply to small pox and scarlet fever ?—Of course it is not for me to question you, but scarlet fever arises from impure water.

1683. Then you are not satisfied that the evidence in favour of scarlet fever being a true infectious disease is sufficient ?—I think scarlet fever arises not only from infection coming from people being in contact with other people ; I certainly think it arises from impure water, for instance.

1684. You probably consider that the impure water would contain the infective germs ?—Yes ; the germs undoubtedly.

1685. Might it not be the case with the contagious diseases of animals that the infecting germ is conveyed in a variety of ways ?—Yes ; but then there may be conditions under which the infecting germs can live, such as impurity.

1686. Exactly ; and if all those conditions are known in every outbreak the probabilities are that the origin of the disease might be discovered ?—Yes ; it might be discovered. But the point I have is this : the germs of the disease might exist and have good conditions under which they might and do exist, and there the disease breaks out, although no outer cause has been brought on the premises to account for the disease.

1687. Precisely ; but then you go back to the original fact that the disease, nevertheless, does depend upon a contagious germ ?—Yes ; I suppose it does.

1688. And that the difficulty which you say commonly occurs, as no doubt it does, in tracing the disease, may depend upon the fact that the germ has previously been conveyed into the soil on which the pig is standing, and has only lately been ripped up ?—If I said that, that would be allowing that the disease had been brought on at some previous stage, but I do not go as far as that. I do not think so. I think by filth, and so on, there may be conditions under which the germs would exist ; but how the germs have come there, of course I cannot say.

1689. But it is not made quite clear yet as to what you mean by these germs that are to exist. What do you mean by existing ; do you mean that the germs are always floating about. Put it in this way : those germs which you say may exist must have an origin ; do you consider that origin to be a previous case of disease in the pig ?—No, I do not. I cannot speak accurately, because I have no actual knowledge of it, but my meaning is this, that where I find so many cases reported, I find a fourth of the number of cases reported so, as occurring on premises where the disease has not been before ; then I say it does not always come from having been in contact with other animals.

1690. Clearly ; that is unquestionably correct, but is it not probable that the germ may be carried by some material or by some person, or dog, or rat, or bird ?—Just so, the same as in foot-and-mouth. I think that an individual, perhaps a pig-man, goes and looks at another pig and finds that is wrong. Then he goes back to his own pig and he may carry the disease with him ; he may take it on his boots and then go and look at his pigs and leave the germs in the sty. I think that is quite possible.

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1691. And in the most careful inquiry you would have very little chance of finding out such a cause as that ?—Yes. There is a case lately reported where that actually did occur ; where a man went to see the pig of a neighbour, a cottager's pig, I think it was (this occurred about seven miles off Chester), and he had the disease break out shortly afterwards. He went to look, and help his neighbour, and no doubt had taken the disease from there to his own pig.

1692. And many such cases might occur without you or any of your men hearing anything about it ?—They might. There was a peculiar case the other day on a farm about six miles from Chester. It is an isolated farm belonging to a large farmer. There he had never had swine fever, and I could not discover, I went down myself and made every inquiry I could, that anybody had been on that farm, in any way or form, to carry the disease to it. It was a very large farm, and the man was rather particular about his pigs too. He had just bought some rather good Tamworth pigs from the show at Birmingham. There was nothing to show, in any way, where any animals or any persons could have brought the disease from. Those sties, I may say, were in a very dirty condition.

1693. It still left a possibility that some persons might have got there ?—They might have.

1694. Without his knowing anything about it ?—That might have been so, of course. There was a possibility of that, but not a probability.

1695. Do you happen to have heard of some cases of foot-and-mouth disease, or cattle plague—but I think it was foot-and-mouth disease, although I am not quite certain at this moment, which—which occurred on places where animals had not been placed to the owner's certain knowledge, for a very considerable period. One of our inspectors went to visit the farm, and walking over the ground he saw a number of sheep droppings. He inquired where those sheep had come from ; the owner asserted that no sheep had ever been on the place. He showed the farmer the sheep manure ; the farmer immediately became alarmed. Further inquiry elicited the fact that it had been the constant habit of the drovers passing along that road at night to rest their sheep in his field for a few hours, and when they thought they had had sufficient time, to drive them out again and take them on to market. It was ascertained further that it was a regular system, and that the rule was to put the sheep in fields where there were cattle, otherwise they would get them mixed, and they would not have known how to separate them, and to put the cattle in fields where there were only sheep. You have not heard of that ?—No, I did not hear of that.

1696. I might say that that accounts for a good number of mysterious outbreaks ?—I can tell you of a case where we had foot-and-mouth in Cheshire in 1884. Major Tennant came down to see it himself. It was a very serious outbreak indeed. It was on a large open place with small ditches cut here and there across it. We took infinite trouble to work that, and it did not spread except at one place, although I had policemen day and night, and night and day, walking round the fields where the diseased cattle were. There were four cattle in a field, and I could not make out how they got foot-and-mouth. I was very much annoyed with the policemen for not doing their work ; but at last I found out that a dog from one of the infected farms had got

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loose and simply ran right across the fields two or three days before, and no doubt that was the cause. There was another case, and rather a more amusing one. We had a farm infected with foot-and-mouth, in 1882 I think, at *this* point. (*Illustrating.*) There were a lot of cattle *here;* another farm *here*, and there was another between these two, and we could not make out how it was that the foot-and-mouth had gone from this farm to that farm on the other side. At last I found that the cowboy at one of the farms was courting the dairymaid at the other, and that is how it went.

1697. What you have stated distinctly shows that disease may be communicated by contagion in a variety of ways which would not be suspected, and those cases very materially assist in clearing up the difficulty of finding out the origin of the disease in very many instances ?—No doubt there are many cases like that, and the most exhaustive inquiries perhaps do not always show it.

1698. Something has been said about the supervision of the local authorities, and I should like to ask you a question on it. I did not quite understand what sort of system you meant. You said very much as in pleuro-pneumonia, but you are doubtless aware that in pleuro-pneumonia the Government undertakes slaughter and pays compensation ?—Yes.

1699. Is that the sort of supervision that you suggest in swine fever ?—They do more than that, do they not, in the way of pleuro-pneumonia ?

1700. Yes, but they start with that ?—The supervision that I mean is to see that the officers of the local authority are carrying out their work.

1701. Does that not rather imply that in the first place you must pay the costs ?—No, not in the way that I mean. Take pleuro as an example, and it seems good lines to work on to eradicate a disease. The officers of the Board of Agriculture come down; they see that the premises are kept thoroughly isolated, that the officers of the local authority are doing their work, and that the regulations generally are strictly maintained; but that does not relieve the local authority from any cost as regards the payment. On the outbreak of foot-and-mouth the other day, which we had in Cheshire, the local authority paid all the extra money which amounted, I think, to 220*l.*, or thereabouts.

1702. (*Chairman.*) What do you mean by the extra money ?—That is special money for the extra work done by the police; extra hours and travelling expenses incurred by the local inspectors. That was all paid for in that way. It is a very serious thing, and becomes a very serious tax, undoubtedly, on the officers of the local authority when they have to do it. Speaking as Chief Inspector, myself, it trebles one's work; but then it is advisable, I think, if you wish to have uniformity of action throughout the country, that there should be somebody to overhaul all of us, and see that we do our work.

1703. (*Professor Brown.*) Do you think that that kind of supervision, which is undoubtedly as you say effective in the case of a newly-introduced disease like foot-and-mouth disease, causing a great deal of alarm, would be tolerated by the local authorities in the case of a disease which has been in the country as far back as anybody can recollect ?—Yes, I think it would. Of course, you will find very often that new laws brought into operation are unpopular to begin with. Take the Education Act, for instance; but still, after a short time it works. We find it is for our good, and it is carried out then. I think, generally speaking, that the people will always conform to any regulations and laws, provided that they see it is for their own benefit. English people are rather slow, I think, sometimes in acknowledging what is for their good, but I think directly they find it to be so, they will only too heartily co-operate.

1704. A great many local authorities, with their present powers to slaughter and pay compensation, do not slaughter, and, therefore, do not pay compensation. Do you think that the majority of those if they were urged to slaughter and pay compensation would do it ?—I think they would very likely do it unwillingly. It just depends. Some local authorities might say; "Well, we think it is a good thing, therefore, we are "willing to do it." Other authorities might say: "This is not the action we think right to work the "disease out, therefore, we are unwilling to do it."

1705. Do you think, with people of that kind, we should ever succeed in getting uniform action; that is to say, in inducing every local authority in the country to do exactly what we suggest ?—I think that unless something of that sort is done you never will get it, looking at it in that way.

1706. Would it not be done most easily by leaving the whole matter in the hands of the central authority exactly as pleuro-pneumonia was placed ?—Yes; if you wish to do it most effectually the lines I should go on would be what you have done in the case of pleuro-pneumonia.

1707. You said something just now which led me to conclude that you paid your police for extra work ?—Yes.

1708. What kind of extra work was it which they did ?—They did extra hours. A policeman, as a rule, works from eight to nine hours a day, but he may have extra work to do.

1709. And then it is the custom, I understand, to pay for that extra work, no matter what the extra work is ?—To make it quite clear, for every four hours which a constable does in Cheshire on cattle work he is allowed what we call one day's special duty allowance, because he has to do his own work besides. By the Act the police are bound to report directly they hear of an outbreak. A policeman reports it to his inspector. Of course he gets nothing for that unless he has to travel to do it, and then if he does travel he gets travelling expenses. Then the inspector comes in, and the inspector has to do all his police work besides, because in Cheshire the inspectors are chiefly sergeants, and they are the men who chiefly work it. They have to do all their sergeants' and police work, all the amount of criminal work, and their sectional work and everything else, and do this cattle work as well.

1710. But he does not get paid for being an inspector of cattle ?—No.

1711. He is simply paid for the extra hours for which the cattle work engages him ?—That is so.

1712. Do you happen to know whether that is the custom all over the country ?—No, I cannot say that. Of course, he gets his travelling expenses; that goes down to what we call the cattle account, and that is chargeable, but not on the police rate.

1713. He gets no extra pay except for extra hours ?—Extra hours of duty performed.

1714. (*Chairman.*) And that is charged on the general county rate ?—Yes.

1715. (*Sir Jacob Wilson.*) Is it your experience, and the experience of your police inspectors, that the disease of swine fever is difficult to detect ?—Is that as regards tracing the origin ?

1716. Not that so much as from the general appearance ?—The first detection.

1717. Yes ?—I do not think so. I think, as a rule, the local inspectors are very accurate. They have been very seldom, indeed, wrong. In the first instance, we call in a veterinary surgeon; we always call in a veterinary surgeon.

1718. Always ?—Always in the first instance in an outbreak. It has to be certified by a veterinary surgeon.

1719. May I ask whether the police inspector makes it his business to collect the outside history of the case before he decides after an inspection ?—No; he sends in his report, first of all, to the chief inspector, which is accompanied by a veterinary surgeon's certificate, and the whole report is made to the chief

inspector. Then certain inquiries are made. I have an instance here with all the papers connected with one inquiry to try and find out the origin of the disease.

1720. May I ask whether the veterinary surgeon to whom you refer is the veterinary inspector ?—Yes, he is the local veterinary inspector appointed by the county.

1721. Is he the veterinary inspector for the petty sessional division ?—No ; the county is divided chiefly into districts according to the sergeants' districts ; police districts. It is maintained in that way.

1722. You mentioned a case of difficulty in tracing disease upon a farm which was exceedingly well kept on which the disease followed a somewhat recent importation of Tamworth pigs ?—Yes, I did.

1723. How long before had this recent importation of Tamworth pigs taken place on that farm ?—I think it was four months.

1724. Do you find that markets are a common source of disease ? — Yes. Out of the 162 cases which were reported in Cheshire, from the 1st January 1891 to the 28th February 1893, 49 cases occurred amongst pigs which were bought from dealers, 39 amongst pigs which were bought at markets and auctions, 32 amongst pigs from farmers, and 42 were bred on the premises.

1725. Are most of the markets carefully paved ?—In Cheshire yes, and disinfected after each sale. It is the duty of the inspectors to go round and see that is done, and that if it is not done then it is immediately reported.

1726. May I ask in what way they are paved ; what is the material used for paving ?—Bricks generally ; burnt bricks, not the ordinary red bricks, not bricks that can be saturated with any moisture.

1727. Jointed with cement ?—Yes, they are decidedly good flooring.

1728. You do not regard those, then, as likely to break up ?—No, they are good bricks, off which water will run freely ; they are good floors.

1729. From the figures you have quoted it appears that many instances have occurred where disease has been carried by dealers ?—Yes.

1730. Would you recommend that dealers should be licensed ?—Yes, I think there ought to be a stricter supervision over dealers in some way ; they should be either registered or licensed. I think they should have to keep books, and, if possible, to show where they got their pigs from, from whom they purchased, and to whom they sold them ; because the difficulty is that dealers have to make their livelihood, and they may put you off. They may say, "I got "my pigs from here," and you go to inquire, and you find an absolutely different story. I do not say all, but there are some who will do it. I may say that, as far as auctioneers and those gentlemen are concerned, they have always rendered me the greatest assistance in trying to trace out disease.

1731. Do you think there is much fraudulent concealment of disease in Cheshire ?—There is to a certain extent, but I cannot say to a large extent.

1732. Do you pay compensation in Cheshire ?—Yes, for all slaughtered animals.

1733. At a rate according to the present Order, I suppose ?—Yes, according to the Order under the Act.

1734. Do you regard that compensation as ample ?—In some cases it acts rather harshly. Pigs are very often bought by people to help to pay the rent, and, perhaps, a small person has one pig ; he is looking forward to that pig to help him, and then the animal is attacked with swine fever, and he only gets half his value up to 40*s.* ; now, especially at this time, when pigs are rather valuable, the most valuable animals on farms, when they are selling well, it would, perhaps, act rather hardly on that class of people.

1735. Would you consider that an increase in the value might diminish the number of concealments ?—I think it would tend in that direction.

1736. At any rate, you attach the utmost importance to establishing some system by which uniformity of action could be established throughout the country ?—Yes. There is one other thing that I think does act rather harshly too, perhaps. It is not a necessary Order, but it has been thought a necessary Order in Cheshire, that there should be 28 days before the place is declared free after the cessation of the disease. If premises are thoroughly cleansed and effectually disinfected, then I think that the pigs might be brought on at once after it has been thoroughly done.

1737. There is a power already existing by which animals can be introduced under 28 days ?—You can do it in less than 28 days. I rather think 14 days is the minimum according to the Act.

1738. Do you object to the power of giving them 28 days ?—I do not object to it. I think, perhaps, it acts a little harshly to keep pigs off the premises for 28 days.

1739. You said you thought it might be reduced after premises were properly cleaned. How would you properly cleanse woodwork ?—The only way is, I should say, by scalding water first of all, and then, perhaps, a strong disinfectant. I believe that scalding water, and plenty of it, and the place well scrubbed, is as good and effective as anything else.

1740. Are you aware of the means which have been adopted by the central authority to get rid of pleuro-pneumonia and foot-and-mouth disease ?—Yes.

1741. Do you see any difficulty in getting rid of swine fever by similar means ?—I think it will be a more difficult matter, but I think it may be done in time.

1742. You think it may take a longer time to accomplish ?—Yes, because I think that pigs are more difficult to trace. As I have said, you can put a pig in a bag and you can take him off. You cannot do that with a cow.

1743. Would you consider that a system of compulsory slaughter for diseased and in-contact animals accompanied by compensation and judicious restriction of movement would be most likely to accomplish that object ?—Yes. I think also if the dealers could in some way be registered it would be an advisable thing to do.

1744. (*The Chairman.*) You would have them registered and take out licenses ?—Yes, and they should keep books in some way so that you could trace the pigs. They would have to account for them. If any inspector came and asked, "where do "you get your animals from," they should be able to show where they do have them from.

1745. (*Mr. Shaw.*) Do you have anything at all to do with the ports of Chester and Birkenhead ?—No, they are both in the borough. There is one landing lairage, I believe.

1746. Then I suppose you do not have anything to do with Irish pigs ?—No.

1747. There are no Irish pigs landed in your jurisdiction ?—No.

1748. You said that the impression among Cheshire farmers was that swine fever proceeded—I think you said proceeded—to some extent from heating food ?—Yes. I was talking to a man only the other day, and that was his impression, and he is a man with very considerable experience.

1749. Yours is a very large dairy district, and I presume the separator is largely used in the dairies there ?—Yes.

1750. Did you ever hear any farmers accuse separated milk of being the cause of swine fever ?—No.

1751. Is it occasionally the habit of farmers to bury carcases in their land rather than report them to the police ?—Yes. I have known cases where

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farmers have buried their pigs in the midden, as they call the manure heap in Cheshire.

1752. Are those buried sufficiently deep in all cases to prevent their being dug up by dogs and the like ?—No, not in all cases.

1753. You mentioned forty-two cases in which the animals were bred on the farm on which they were infected ?—Yes.

1754. And that there was no reason whatever why they should have got infection ?—That is so.

1755. You will excuse me for asking the question, but did you make any inquiries as regards whether the castrator had been on the farm within a recent time ?—Yes, that is a very common inquiry to make.

1756. Whether they keep a boar in the particular place, or have any of the sows been sent to a boar ?—In some cases I have known that to have occurred where the disease has broken out on the farm, but not in all.

1757. Did you in the forty-two cases make inquiries as regards whether any of the sows on those farms had been out to the boar ?—That is a general inquiry; I cannot say whether it was made in each case, but it is a general inquiry.

1758. As a matter of fact you generally make that inquiry ?—Yes, and about any recognised source of spreading infection.

1759. How far was the farm upon which the Tamworth pigs were brought from any other farm ?—It was about three quarters of a mile from the nearest farm. It stands out in the fields right by itself.

1760. Were there any cases of swine fever within a reasonable distance of it ?—No. I do not know of a case of swine fever being near that farm for months. I think straight across the country would be some five or six miles to a place called Farndon where it was.

1761. Still you see there is nothing to prevent the disease being spread from similar distances to it in the way you explained, by the cowboy making love to the dairymaid, and so on ?—Yes, only I do not know whether they do it in pigsties.

1762. Then there is the question of dealers' carts and of disinfecting them; that is an important matter ?—Yes, I think that is very important.

1763. What becomes of the slaughtered pigs in your district, and also their entrails ?—They are always buried, and quicklime put over them, according to the Act.

1764. Do you not think this burying is rather a risky business ?—I do not think it is risky provided it is done judiciously. I think if the pig is taken to the hole, and there knocked on the head and popped into the hole it is all right, but if he is perhaps slaughtered in the sty, and then a lot of blood spilt, and that sort of thing, I think it is a most injudicious thing.

1765. But the chance is that very often these animals get dug up by dogs and the like ?—Not when they are properly buried.

1766. And rats might get down to the body and carry the infection; they might burrow down to these pigs ?—Where they are properly buried I think there is no risk. I had swine fever on my own farm once, at least I was told so, but I do not believe to this day it was swine fever. I bought the pig, it was a young pig, from a farm which I knew there had been no disease on. It happened to be the Duke of Westminster's, whom I always get my pigs from. There had been no swine fever there. The animal was perfectly well at night, and in the morning it was found dead in the sty. I sent for the veterinary surgeon, and the veterinary surgeon said it was swine fever.

1767. Is that not like a case of apoplexy ?—It looks more likely.

1768. Did you have the entrails examined ?—The entrails were examined, and the veterinary surgeon showed them to me, "there it is," he said, "there is swine fever." Of course I did not know whether it was swine fever, but that is what he said to me. He was a qualified veterinary surgeon.

1769. How long had you the animal from the pigsties ?—I had had it about a month or six weeks.

1770. Then there was time for it to develope the disease, it might have possibly got the contagion on the road ?—No, because it came in their cart and was handed over, and I never had anybody on my premises connected with the pigs.

1771. Is there any danger that if the local authority had the administration of the public funds, the nation's funds, there would be any undue favouritism and the like shown in the matter ?—No.

1772. You think not ?—I think not. Of course, I can only speak for my own authority, but I do not think so.

1773. You mentioned the merits of brick-flooring with cement pointings, surely a cement floor which would cost possibly less than a brick floor with cement pointings would be a better floor than the brick would be ?—When I say a brick floor, I do not say that all the sale yards in Cheshire are of that particular material, but they are of such material that they are not porous.

1774. But you have bricks very cheap in Cheshire, as a matter of fact, have you not ?—Yes, it is a clay country.

[The Witness withdrew.

FOURTH DAY.

Thursday, 9th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. ALEXANDER SHAW.
Mr. JOSEPH SMITH, Jun.
Mr. T. CARRINGTON SMITH.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary*.

Mr. CORNELIUS CUNNINGHAM, called; and Examined.

Mr. Cornelius Cunningham.

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1775. (*Chairman.*) I think you are a veterinary surgeon?—Yes.

1776. You are one of the inspectors for the local authority of the county of Midlothian, are you not?—Yes.

1777. In that position you have naturally given a general attention to the whole subject of the diseases of animals, including swine fever?—Yes.

1778. I believe you are aware that this inquiry is particularly directed to the subject of swine fever?—Yes.

1779. I would like to ask you, in the first place, whether you would tell us briefly your views on the character of the disease, its origin, and the circumstances which tend to keep it up?—I consider swine fever a contagious infectious disease depending on a specific germ or seed, requiring suitable subjects and circumstances for its development. In enclosed, dirty, overcrowded pigsties it appears to find a congenial element and soil; although I must say that one of the biggest outbreaks I have seen occurred in a large piggery of good construction, fairly drained, isolated, and in a healthy locality. Once the disease finds lodgment, in my opinion, it is very apt to spread, no matter what the surroundings are. Young pigs are most subject to it, and succumb most readily. Older animals, however, at times succumb to it very readily also; for instance, a brood sow considered all right in the evening is occasionally found dead in the morning, and we have known a big, strong, healthy boar cut down in a couple of days. Young pigs often die simply from the shock of the disease; a few days carry off others. Many recover if time is allowed, I believe, though I have never given them the chance to do so. I have known two instances of neglected cases live two or three months with the disease in a chronic form; miserably diseased objects infecting others. Those are the only two cases that I have met with in a chronic form, and if you wish it I could give you the particulars of the two cases. They are rather singular, for it is not generally believed that a diseased pig lives as long as three months, but in these two instances the animals did. If you wish the details I could give them.

1780. You had better give us any details of them that you have?—The first case was on 1st July 1885. The owner was a market gardener, and he had a small piggery. He sent for me one day to see his pigs; he did not know what was the matter with them. I saw one, and I thought it was swine fever, and on looking at a second one I was almost certain that it was. I killed them both, and I found swine fever of about ten days' duration in the one; the other was an incipient case. We gave instructions for the disposal of the others, that they should be slaughtered at once. On coming away, pointing to the door of a place the owner said, "I have another one in here." When I looked in there was a pig standing, a poor miserable object, with hair about two inches long. I thought, this is surely no case of swine fever, but I slaughtered, and on the iliocaecal valve at the large intestine I found a big mass of old chronic ulceration, and the several organs adherent to one another. It had every appearance of being an old case of swine fever, which it undoubtedly was. I brought home the diseased portion. I was rather proud of the case, as I had had three diseased subjects on the same premises, one three months, one ten days, and one a few days affected. There was rather a singular circumstance attending that case, which made me remember it. Generally speaking, when I take home any of these little organs I burn them up after examination, but, unfortunately, by mistake part of one of the pigs was thrown on a dunghill. That dunghill swarms with rats. I lost sight of the thing altogether till a fortnight afterwards. There was the dunghill here (*illustrating*), and a wall with holes through it, and a dunghill there, close beside, and one pigsty close beside that second dunghill. On the 17th July a pig in that pigsty died from swine fever. It was as bad a case as ever I saw, and my idea was that the rats had carried the infection through from the first dunghill to the other place.

1781. (*Mr. Carrington Smith.*) How long was the period between?—The first cases were on the 1st July, and the other was on the 17th July, that is seventeen days between. I will give you the other case of the chronic form of the disease. During 1890 and part of 1891 I was not inspector to the local authority. There was some disagreement about a case of pleuro-pneumonia, and I gave up my office, and I was not an inspector for several months. During the winter of 1890-91 rumours frequently reached me that swine fever existed in a certain part of the district. I have had good reason to know since that

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it existed there unrecognised from December 1890 to May 1891, that is nearly five months. One owner hid the disease, and another owner reported the disease, but, unfortunately, the inspector did not recognise it as swine fever, and the poor fellow's whole stock of pigs, 30 animals, died, excepting nine that were sent to the butcher in good condition. He sold in February, perhaps you will mark this, a litter of young pigs. The disease went on unrecognised till May. Then I got two very plain cases at the same place, though at a different piggery, and I reported them to the local authority. Within a week afterwards there were three piggeries emptied, and 115 pigs carried away. That shows, of course, that the disease had been hidden in the district. That was in June 1891.

1782. What do you mean by carried away; were they taken away alive or dead?—They were cleared out, all slaughtered out.

1783. By the local authority?—By the local authority; they were taken away to the city slaughter-house, and killed off there. Now, from September of the same year 1891, to March 1892, I had to do with fourteen outbreaks of swine fever amongst 730 pigs. I was reinstated by this time in my office as inspector. There was no local inspector, and I thought it would be as well to get appointed again, so I asked permission, and the local authority allowed me to act. What I want to bring out about the three months is this: this man sold the litter of pigs in the month of February (we dug up some of the pigs he had buried in February, and found plain traces of the former existence of disease in the place). We followed this litter of pigs to an adjoining parish, to the premises of the man who had bought them, and we found three or four dead of those pigs. I think there were seven altogether, and that there were four dead and three living. Now, these three swine-fever pigs had lived from the month of February to the month of May, when I examined them, and there was scarcely among this man's stock a healthy animal. That is one instance of how the disease is spread. Failure of recognition, and the selling off of diseased animals into another district, carries the disease, and if the disease is not recognised in that district and the pigs are allowed to live on, it spreads the disease throughout the country; and, of course, on the other hand, the importation of diseased animals also produces the disease. The case also shews that, as stated, swine-fever affected pigs may live three months with the disease in a chronic form.

1784. (*Chairman.*) Will you tell us what is the present policy of the local authority of Midlothian in regard to the movement and slaughter of animals, whether diseased or in contact?—I think the mode of procedure of the local authorities varies very much according to the inspectors. I can give you what I do myself, and what the local authority have allowed me to do, but I think that other inspectors seem to act differently.

1785. What are the general regulations of your county; do you recognise slaughter and compensation in cases of disease?—The present mode of procedure is to kill off the diseased and allow the healthy to live on. I have seen no case of disease since March 1892. Perhaps you will allow me to give you the number of outbreaks that I have had. I find from my book of forms that, dating from 1883, I have had to do with 50 outbreaks of swine fever among, in round numbers, 2,000 pigs. The years in which these outbreaks occurred were as follows: in September 1883 there was a severe outbreak among 101 pigs at a large piggery, isolated; in February 1884 there was one among 55 pigs; in 1885 there were twelve outbreaks among 390 pigs; from June to November 1886 there were four outbreaks among 68 pigs; in 1887 there were six outbreaks among 280 pigs (of course these are round numbers); in December 1888 there were three outbreaks among 51 pigs; from January to July 1889 there were ten outbreaks among 140 pigs; from September 1891 to March 1892 there were, as I said before, 14 outbreaks amongst 730 pigs. To these have to be added four other outbreaks, to which I was called in consultation, with 300 pigs on the premises. I have gone on the principle that if you destroy the germ of disease in the animals and in their surroundings the effects will disappear. I have always and for years practised stamping out as rigidly as our local authority would sanction, and the rules I have acted on are these: first, make certain that the disease really exists; always make one, or, better still, two or three *post-mortem* examinations. Second, serve declaration of disease on owner, and report in the usual way to the local authority and the Board of Agriculture. Third, have a constable at the place, carefully count the animals, point out the diseased ones, and order slaughter and burial at once. Fourth, with the sanction of the local authority, slaughter all fat or in good condition animals at the earliest opportunity; destroy and bury all suspicious and lean stock as soon as possible, thus clearing the premises within a week, or four days if practicable. I may mention that in the first outbreak that I had we began to kill the diseased animals on the Wednesday, and by the Saturday afternoon at four o'clock the man had not a pig in the place; they were all killed, 101 pigs. As to disinfection: scrape the woodwork, walls, and floors, and thoroughly sweep the premises and remove all dirt, dung, and loose earth to the dunghill, square up the latter and cover with a layer of lime. That is the first process. The next is boiling water; scald the wood, walls, and floor of the sties at the rate of two or three a day; using as fire-material every useless or dirty piece of wood in the place; burn up all the old wood that possibly can be got hold of, burn everything of little value.

1786. (*Mr. Carrington Smith.*) The doors?—If the doors are dirty and are old; I burn everything that it is not worth keeping, in fact.

1787. (*Mr. Stephenson.*) Do you refer to the sties?—Yes; as much as we can possibly get the people to burn, we put out of the road altogether. Unless the floors are asphalte, cement, or brick, or pavement cemented (there are many such floors in those sties); dig them up and cart off at least six inches of the soil to the dung heap. That is to remove the soil, because I think the germs of disease remain in the soil. I do not think you can properly clean a swine-infected place if you leave the soil saturated with the germs of the disease. Having removed six inches of the soil, or two or three inches if you cannot get six, scald and clean the sties, pour boiling water over them, and relay the floors with a foot of fresh ashes and gas lime, if it can be had.

1788. (*Mr. Wardlaw Ramsay.*) What do you do with the soil?—We put it on the dunghill if there is no better place. If it can be buried so much the better. I have at times put it into an old quarry pretty deep, and covered it over with stones and earth. Generally it is thrown on to the dunghill and covered with lime. Having got the place thoroughly cleaned and washed and scraped, I like coal tar put on to the floor and walls, or gas tar; coal-tar the walls for three feet up and paint the floors too, if possible, with it, and then limewash the roof and the remainder of the walls. Then scatter a layer of lime or gas lime all over the floor and the yard of the premises. While these operations are being carried out remove the manure and disinfect it. The manure, I may say, is generally carted away on to a field if I can get it; and we get the farmer to plough it in at once; we scatter it on the field and plough it in. Then take off the upper soil of the manure pit, and re-fill it with ashes; see to the drains, clean them thoroughly out, and make everything as sweet as possible. Burn up all loose straw, sacking, and such rubbish about the piggery. I am very partial to fire, boiling water, coal tar, and lime; with

carbolic acid for the drains, and to mix with the whitewash. This mode of inspection and disinfection is what we have carried out, and what we think is actually necessary, and has been attended in our hands with very fair results. That is the practice which I carried out twelve months ago. But now the diseased animals are simply killed, the fat animals are carted off at the owner's risk to the slaughter-house, and the place is well washed and whitewashed; and I think that is about all that the Act requires.

1789. (*Chairman.*) Has your authority ever been able distinctly to trace any of these outbreaks to swine brought in from neighbouring counties?—Yes, I have been able to trace them.

1790. Would you tell us anything from your experience on that subject?—Take the outbreaks in 1885, for example; there were 12 outbreaks among 390 pigs. In one part of the district where it broke out with great severity, in the first place I entered there were about 70 animals affected. We did not go through the rest of the piggeries, but we called on the owners and asked if they had any pigs dead and warned them of course that the disease was next door to them.

1791. (*Mr. Wardlaw Ramsay.*) Was this at Gorgie or Slateford?—At Gorgie Dam-side. There was a wooden shed standing just beside the piggeries, and I said to the constable, "Are there any pigs in there" and he said "No, I was in a fortnight ago, and there are no pigs there," so we did not go in. This was on a Saturday. On the Monday I was called down to that same wooden shed, and I found six very bad subjects in it, which had been brought there the previous week by a hawker. This hawker had had an old horse, and he exchanged the old horse for six pigs at West Dalry Meadows, and he had brought them in and put them into this wooden shed unknown to the constable, who had been in that shed, mark you, about a fortnight before. I have not the slightest doubt, for they were very bad cases, that those pigs had brought the disease to Gorgie Dam-side, and that it went through from piggery to piggery immediately afterwards. That is a clear case in my opinion of the disease being brought into a healthy district. In another section of these same outbreaks there was a little Irishman, and he had got the disease on his premises. How he got it I do not know, but he had it; he had hidden the disease.

1792. (*Chairman.*) You say you do not know in that case where the disease came from?—He had had it for so long that I could not trace it.

1793. Will you tell us from what outside county that pig came, and whether it was landed at a port or whether it came across the land border?—Which pig?

1794. The pig you are speaking of now. You said an Irish pig, I think?—I said there was an Irishman, I did not say an Irish pig.

1795. Could you say how the pig was brought into Midlothian, that is what I want to get at?—I do not know. I said I could not trace it. The owner was an Irishman and he had hidden the disease.

1796. (*Mr. Carrington Smith.*) In the first case how far was the infected sty from the healthy sties? You say these pigs were put into a wooden shed diseased, and that the disease spread to otherwise healthy sties. How far off were the healthy sties from the wooden shed?—Some of the piggeries stand by themselves, but for the greater part they are in groups of two or three or half a dozen, and they are close together. In this case the distance was only a few yards. In the case of the Irishman's pigs there were six piggeries all close together. But there was one singular circumstance in that outbreak. There was one other Irishman and he had 19 or 20 pigs; his place was surrounded with disease and his pigs remained apparently unaffected.

1797. (*Chairman.*) When Irish pigs reach your district, how do they come as a rule—partly overland or are they landed at Leith?—I am not able to answer that question. I am not much in the pig trade.

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1798. You could not tell us?—No, I cannot. I do not think there are many Irish pigs near us. There are a good many Irish people, but there are not many Irish pigs. The pigs in our neighbourhood are mostly of a better breed.

1799. I want now to ask you a few questions in regard to another branch of the subject, which is as to how far you are of opinion that more effectual measures could be taken of a sanitary character, apart from any actual outbreak of disease, to prevent the existence of filthy piggeries and places of that kind where the disease gets established when it once has begun?—Some years ago I advised our local authority, and the chief constable of Midlothian to endeavour to obtain power to license the pig feeders' premises. If these men will keep pigs, it should be imperative that before they are allowed to keep them they should have proper places to put the pigs into.

1800. You would, in fact, extend the principle of the Dairies and Milk Shops Order?—Yes, very much on the same lines. I would scarcely apply that rule to farmers. The Dairies and Milk Shops Order does not apply to farmers, and I would scarcely license farmers' places for pigs. I do not think there is much need for that, because it is rather a singular thing—and perhaps I should bring this out—that I have only had one outbreak of swine fever on a farm, and only two or three among private individuals' pigsties; all the others were among these pig feeders' stocks.

1801. You have just suggested a license. Who would have to take out the license according to your view?—The owner of the piggery.

1802. (*Mr. Carrington Smith.*) That is the occupier?—Yes.

1803. (*Chairman.*) I suppose you would recommend that no license should be given except it could be shown that the license-holder had got a piggery in a proper position, and of a proper size. Is that your suggestion?—Yes. I would make every pig feeder have at least floors that can be cleaned—cemented floors, or asphalte floors, or brick cemented floors—cement for preference. I would be very particular also about the drainage. I would have thoroughly good drains in these places, and, if possible, no underground drains—the drains should be on the surface if possible—and I would make each piggery have a separate drain—not let them connect the one drain with the other, but let each piggery have distinct drainage by itself.

1804. Would you make that incumbent upon every person who keeps a pig?—No, as I have just stated, I would make it incumbent upon those pig feeders.

1805. Pig feeders?—Yes. I mean the men who make a living almost exclusively by feeding and keeping pigs. A farmer, of course, keeps a lot of pigs, and really some farmers have such big piggeries that I would almost make it incumbent upon them, too; but then there are other farmers who have only a few pigs, and I think it would be a hardship for such farmers to be compelled to make asphalte floors for them. There is seldom any disease about the farm places. I am simply speaking, of course, about my own district. Then private individuals, cottagers, keep pigs, and though certainly a cement floor would be better for them, I think it is scarcely necessary to make it incumbent on every man who keeps a pig to have a license. We do not do that with cows. Many of the farmers who have cows are not registered cow-keepers. The man who only keeps a cow for his own use is not a registered cow-keeper, so I would make it the same with the pigs. I would make it incumbent that these pig feeders should have licenses, and should have proper premises.

1806. How would you meet the difficulties which

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you have described to us in regard to the disease coming into the district of one authority from the district of another authority, because that is really the principal subject of our enquiry here?—I scarcely understand the question.

1807. You have told us that disease frequently comes into one county—for example, your county—out of another?—No, I cannot say that; the disease may have come from the city.

1808. That is the same thing—we will say from another authority. I do not necessarily mean a county, but a separate authority. You are aware that there is a great deal of trouble which has arisen generally, not, perhaps, in your county specially; from the division of authorities; there are city authorities and county authorities, and authorities with boundaries which are not convenient?—The only suggestion I would make is simply this: That the Board of Agriculture should take the matter in hand and enforce the same rules—perhaps in a slightly modified form, and the same system of inspection as prevails with regard to pleuro-pneumonia. I was in a county the other day, and I began talking about swine fever to a veterinary surgeon there, who is an inspector for the county, and he said, "My county "does not recognise swine fever." "What do you "do with it, then?" "We let it alone. If I have "an outbreak I am ordered to report it to the local "authority, and it does not go any farther."

1809. (*Mr. Carrington Smith.*) Is that a Scotch county?—Yes.

1810. (*Chairman.*) You tell us that there is a county in which practically no notice is taken of it?—Yes. If one local authority acts in that way, that county is quite enough to pollute Scotland. In my own district I have not seen a case of swine fever for twelve months. I stamped the outbreaks out as thoroughly as I could, but if they had not been stamped out there was quite enough disease in my district twelve months ago to have polluted the whole of the United Kingdom. There were 730 pigs, and there was scarcely a sound one in the whole lot of them.

1811. (*Mr. Shaw.*) What district is this?—A circle of about two miles in diameter would include all these piggeries. They are all within about two or three miles of the City of Edinburgh.

1812. About what date did you say that those 730 pigs were infected?—From September, 1891, to March, 1892. I had fourteen outbreaks amongst 730 pigs.

1813. (*Mr. Carrington Smith.*) And scarcely a healthy pig amongst them, I think you said?—I might qualify that and say there were very many diseased amongst them—which amounts to about the same thing. I could give you an idea of the state of the pigs. There was one large pig feeder who had a large piggery, well kept, and nicely constructed. He had 240 pigs. There were only about forty of those, suckers—that is young pigs—the other 200 were shots from perhaps three months old up to brood swine and boars two or three years old. That man had got swine fever amongst his pigs, and I began the process of stamping out which I have explained to you, and we had them cleared as soon as we possibly could. I sent the pigs away to the slaughter-house as fast as I could. I do not exactly recollect the number of pigs that were condemned, but the salvage of the local authority was only 71*l.* out of 240 pigs. There must have been very few healthy pigs among that lot. The man got 302*l.* compensation—I made his schedule out myself—and the local authority of Edinburgh only got 71*l.* for the sale of the pigs. I remember one instance in which I sent fifty-six pigs into the slaughter-house, and only eleven of those pigs passed. A great many of them were condemned for swine fever, and many on account of tuberculosis.

1814. Might I ask whether those two sums of 71*l.*, the salvage to the local authority, and 302*l.*, the amount paid to the owner, would have covered the net value of the whole of the pigs if they were healthy?—No, they would not. The diseased pigs they are valued as healthy pigs, but the owner only gets half value, but with pigs returned as healthy, of course the owner gets full value.

1815. Under the Act?—Yes. We put, I think, 135 into a trench, slaughtered as diseased. Those pigs were valued at their full value, but the man only got half the value of the pigs. Other cases which I returned as healthy pigs were found at the slaughter-house to be diseased; the man still got the full value, so that 302*l.* was not the real value of the animals if all had been healthy.

1816. (*The Chairman.*) Did that slaughter include the contact pigs, or only those actually diseased?—Both in-contact and diseased. I have stamped out always. I never left a pig alive in an infected place after that little outbreak in 1885 I told you of in which a diseased pig had been allowed to live for three months. I just said to myself, "I cannot inoculate these pigs, or do them "any good. I will enforce stamping out as stringently "as I can;" and I have done that ever since. Whenever I enter a place I mark out the diseased pigs, and slaughter them at once. Then I look round the place and see whether there are any fat ones fit to kill, both for the advantage of the local authority and for that of the owner, and we send them away to be killed as healthy animals. Then we come to the lean and suspicious ones and kill them, that is, we clear the premises within four days or a week, if practicable.

1817. (*Mr. Wardlaw Ramsay.*) I was going to ask you to describe the place of which you have the principal experience, but I think that we might perhaps arrive at that more shortly. The other day we had evidence from another witness and he described the conditions upon which pigs were kept or used to be kept at Dalry-road. Are the conditions in which pigs are kept at Gorgie and Slateford much the same as they were at that time in Dalry-road? It was Professor Walley who described them to the Committee?—I used to inspect Dalry Meadows.

1818. Perhaps it would be just as well to say, in a few words how the pigs are kept?—I have not been in Dalry Meadows for years; I cannot say decidedly.

1819. What I want the Committee to understand is whether the pigs are all kept together—all close together, you know, in rows of piggeries, or detached and where the groups of piggeries are?—At that time Dalry Meadows——

1820. Now, I mean?—There are not nearly so many piggeries at Dalry Meadows now as there used to be. A great part of the ground is built on, and I think the piggeries are not so crowded.

1821. To what particular localities does your experience refer?—Do you mean the names of the localities.

1822. Yes?—The names that I can give you are Gorgie district——

1823. That being how near to Edinburgh?—The city boundary comes near it.

1824. We took the Post Office the other day and what would be the radius from the Post Office?—The city boundary is only about a quarter of a mile from Gorgie.

1825. Then besides Gorgie?—There is a long strip at Gorgie, and it includes Gorgie Dam-side, and Stonehouse Mills.

1826. It is more a general idea of the district that I want. I do not want it very accurately?—Gorgie district and Slateford district and the Stoneyport district.

1827. What number of pigs would be kept in those three places do you suppose—Gorgie for instance—

tell me roughly ?—I should require to make a calculation. I could perhaps give it.

1828. I would only ask how many pigs do you suppose there would be now ?—In Gorgie district there would be about 600.

1829. And in Slateford, more ?—I could give that but not at the moment.

1830. Please would you tell the Committee what are the conditions there upon which pigs are kept; is there also importation from other places, or are the pigs bred on the premises mostly ?—The large piggeries generally try to breed within themselves—a large pig owner generally endeavours to breed his own pigs.

1831. Therefore there is not importation from other counties ?—He has, of course, to import occasionally boars, and brood swine.

1832. Yes, but not store pigs for feeding ?—Yes, but there are other pig-feeders who do import a good deal.

1833. I want to get at that ?—There are some that breed as much as possible, and only import when they cannot help it.

1834. The others are most important ?—Then of course there are other pig feeders who are not so particular, they will buy pigs whenever they can get them.

1835. Will you tell the Committee where they principally come from; is there any one county ?—They generally buy them from the farmers around, in the sales that are going on, wherever they can get them.

1836. Is there any market that they deal with more than another ?—The Edinburgh market, I think, they go to the most. Some practical pig feeder would be able to tell you that better than I can, but I think that is the principal market.

1837. In your evidence you state that there was one county which did not do anything towards stamping out swine fever; do you know of any case having been imported from that county ?—No, I cannot say that I do. Of course I would like it to be distinctly understood that I did not say the county did nothing, only that I was informed such was the case.

1838. Then I think I understood you to say that many veterinary surgeons were not capable or not able to diagnose the disease, or recognise it did you say; perhaps we may modify that ?—I do not think I said that, but I believe it is the case.

1839. There would be a difficulty ?—I believe a veterinary surgeon to know swine fever must have had practice and experience in swine fever. Now there are some veterinary surgeons who have had neither practice nor experience, and these men cannot be expected to be thoroughly acquainted with the disease.

1840. Then I understand that it is by practice and experience you yourself have learned it ?—Yes, entirely; when I began I knew little or nothing about it.

1841. Is it your opinion that many mistakes have been made in the diagnosis of the disease ?—I am not in a position to state that, but I think it is not improbable. Of course I have no data to go on, except the cases at Gorgie.

1842. Is it your experience that this disease is more prevalent at one time of the year than at another ?—It is a common idea in our district, and I believe it is the case that September, about the fall of the year, is the time when we have to look out for swine fever.

1843. The fall of the year ?—Yes, about September. So much so that this year I requested my local authority to allow me to go round to the piggeries at Gorgie and Stonehouse Mills and other places, and warn all the pig-feeders to be very careful in purchasing the pigs, not to purchase them from the Meadows or any place they thought disease was in, and to clean their piggeries thoroughly well, and to take every precaution. We have not had any cases this year.

1844. Is there any disease in these districts at the present time ?—No. I have seen no case of swine fever for twelve months as stated.

1845. Since when ?—Since March 1892.

1846. To what do you attribute that immunity from disease ?—I am speaking about my own district, and there I attribute it simply to the severe stamping out.

1847. And to the disinfecting process ?—Yes, the process that I have given you. Of course I advised the people to be very careful where they got their pigs from after they were cleared out. We have had no recurrence of the disease since.

1848. Compensation was given by the local authority for the diseased, and also for in-contact pigs ?—Yes, one-half for diseased animals as I have said, and full value up to 4*l.* for healthy animals.

1849. You mentioned just now that a good many of the animals which were taken to the slaughter-house in Edinburgh were condemned as being unfit for food, but I think you said that many of them were condemned, not for swine fever, but for tuberculosis ?—Yes.

1850. Was compensation given for those ?—Yes, compensation was given for those because they were returned as healthy animals. If I valued a brood sow at 4*l.* as a healthy animal, and she was taken to the slaughter-house and found infected with tuberculosis the owner got the 4*l.*, but of course the carcase was condemned.

1851. What proportion of cases of tuberculosis do you suppose there would be ?—They vary very much in the different piggeries.

1852. Do you often find the two diseases in the same animal ?—Yes, there was one piggery especially, where there were 110 pigs. I think every animal in the place, at least almost the whole stock was impregnated with tuberculosis, young and old.

1853. Was it the fact of swine fever being there that led to the discovery of tuberculosis ?—Yes; this man bred his own pigs, and if it had not been for the swine fever these pigs might have been going on yet, and tuberculosis amongst them.

1854. I think you told us about the steps that had been taken for the destruction of woodwork and otherwise disinfecting it. Was that done at a great expense ?—The owners did it at their own expense.

1855. The owners did it ?—Yes.

1856. At your request or at the request of the local authority ?—I told them I would give them the best advice I could. I told them it was for their interest as well as for that of the local authority to do all that I wished them to do, and they did it without any demur.

1857. And they did it quite willingly ?—Yes, only I sometimes thought it was pretty hard upon the pig-feeders, and that they might have been allowed a little more, but I gave them pretty good compensation to cover their loss and trouble, so far as practicable.

1858. Could you please tell us what sort of inspection there is at the slaughter-house in Edinburgh, and whom it is conducted by ?—It is conducted by the slaughter-house superintendent and market inspectors. Do you wish the names ?

1859. I think there is no harm ?—Mr. Durie, Mr. Scoular, Mr. Porteous, and Professor Walley as chief.

1860. So far as the interests of the county are concerned, do you think that that system of inspection by one of the Edinburgh city officials works well ?—It does not work well for the county.

1861. In what way, would you tell the Committee ?—The inspection in my opinion, both in pleuro-pneumonia and in swine fever, was just a trifle too severe.

1862. Too severe ?—Yes; in the Edinburgh slaughter-houses. Of course that is my own opinion. But I do not grumble much at the men

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doing it. Their rule is that all the meat which passes them must be fit for human food and sound marketable meat. Now a pig with a trace of swine fever or a trace of tuberculosis is not really, strictly speaking, a thoroughly sound wholesome pig for human food.

1863. You said it was rather too severe; does that mean that you think an animal slightly affected might be passed as fit for human food?—It comes to this, and that is pressing the question pretty closely home—if you lay down the rule that every beast with a trace of tubercle on it is to be condemned, look how many bullocks you will have to condemn.

1864. It is to cases of tuberculosis more than to cases of swine fever that you are referring, is it?—I think some of the carcases might have been passed with swine fever.

1865. You think there is a degree of the disease at which an animal might be considered fit for human food?—It is fit for human food, but it is not, strictly speaking, perfectly healthy food. The same rule applies to tuberculosis. If you put down the rule that an animal slightly tainted with tuberculosis is unfit for human food, why there are comparatively few animals that would pass, tuberculosis is so rife.

1866. Then I understand that really all that you have against the present system is that the city authorities are rather too strict in the interests of the consumer?—Yes. I have no doubt that the consumers and the public will not grumble at the system of inspection; still it comes hard on the local authority.

1867. Now, a few questions with reference to the local administration. Are cases of swine fever always reported—at least, do you believe them to be well reported, as a rule?—I must say, perhaps I should not say it, that during the time I was not inspector I do not think they were reported.

1868. But now?—I think they are, at least I have had none for 12 months, and I think there is no hiding of the disease now.

1869. You think not?—Yes, simply because they know that I give them good compensation. In the case of pleuro-pneumonia I have not the least doubt that the fact that pleuro-pneumonia has been overcome is in great measure due to the good compensation.

1870. Would it be quite easy for a man to conceal the disease in Midlothian?—He could conceal it for a considerable time, but it generally comes to the surface.

1871. Then you think that the inducement to people to report is the knowledge that they will be compensated?—Yes, and fairly dealt with, liberally dealt with; at least, that is my experience.

1872. Do you think there is a general disposition on the part of owners of pigs in your district to assist in these measures for stamping out the disease?—Yes, I think they wish to do it; I think they wish to stamp it out. If they are fairly dealt with, I have not the slightest doubt that they will report and give every assistance in their power.

1873. There is one point I omitted to ask you which refers to a previous question: have there been any prosecutions in your district for non-reporting? There have been two or three, but, generally speaking, we do not wish to be too strict with such offenders. It does not do much good. There have been a few prosecutions, and there might have been more.

1874. In the case in which the police found out the disease did you tell them, or how was the disease found out?—The little Irishman I was speaking of was a case in point, he was prosecuted and convicted. Of course, when we found he had had the disease, and sent the police ——

1875. Did you find that out yourself, or did the police find it out?—No, the Irishman just reported it in the usual way. He had a piggery of about 35 pigs, and he hid the disease. I was told that he killed them right and left, and when it was reported that his neighbours had the disease, by that time he had only five diseased pigs, but I knew the man had had the disease in his premises for a considerable time, and advised prosecution.

1876. (*Sir W. Kaye.*) How long had that Irishman been resident in Scotland?—I do not know.

1877. (*Mr. Wardlaw Ramsay.*) To your knowledge have the police ever received any remuneration of any sort in connection with their duties?—I think they get a trifle, but very little.

1878. They do get a trifle?—Yes; the constables tell me they get a little.

1879. From the local authorities?—Yes.

1880. For reporting a case?—For general oversight of a case. The policeman has a lot to do. We give him his instructions as to slaughter, burial, and disinfection, and he sees the thing done.

1881. I understand that you are wholly in favour of compulsory slaughter?—Yes, I have always practised that.

1882. Both of diseased and of in-contact animals?—Yes.

1883. With reference to areas, is it your opinion that a large infected area is necessary?—It depends entirely on the circumstances of the case.

1884. I would like to take your own circumstances, because that would be of more value, I think?—We pursued our system of inspection in these 14 outbreaks I tell you of without any area; there was no area declared at all. Of course, the piggeries were all closed.

1885. At what distance would you think that you would be free from the ordinary risk of infection?—I cannot tell.

1886. I mean to say quite apart from the conveyance by animals or vehicles or birds?—I cannot tell you; it would simply be a guess if I were to say anything. I think the rats carry it very often.

1887. I will get at it in this way. Given that the disease is prevalent in Gorgie and Slateford, would you consider that making those two places infected places would be sufficient, or would it be necessary to have a larger area?—I have already said that I managed these outbreaks without any area. I do not think we had much need for any area in this case.

1888. Now, supposing that the Board of Agriculture were to see fit to take the control of this matter into its own hands, would you tell us in what way you think the local authority could assist them, and also, if you think that any additional authority would be required by the local inspector?—I think the local authority would require to have power to licence the piggeries.

1889. I think you have given that already?—Then I think it would be a very good plan in places such as Slateford or other districts, where swine fever is liable to break out, to retain a local veterinary surgeon at a small annual fee.

1890. As inspector?—Yes, just to keep upon the alert, to give advice to people, to warn them if there is any outbreak near, and generally to be of service in the way of preventing disease.

1891. I take it that you think, with the exception of the Board of Agriculture taking it into their hands and paying a compensation, the present machinery is quite adequate to deal with the disease?—Yes. I think if the Board of Agriculture furnish the compensation and take general oversight, that the present machinery could cope with the disease. I think the main objection the local authority have is the heavy tax on the ratepayers; the heavy amount that is paid and the small salvage that they receive, seeing that there are so many carcases condemned at the slaughterhouse.

1892. (*Mr. Stephenson.*) I would like this cleared up first. You say that when you find swine fever in

your district you at once kill out the diseased pigs?—Yes.

1893. And in the course of a week or two you have all the pigs killed?—Yes.

1894. I want to know whether you have power to order slaughter?—That is admitted, of course, with the sanction of the local authority.

1895. Is it necessary for you to have a meeting of your committee to get the sanction?—I simply write and advise that these pigs should be killed, and request permission to kill them. I have always received permission and sanction.

1896. Who gives the permission?—Mr. Balfour, the County Clerk.

1897. Who values the animals?—I value the whole of them.

1898. You value, you inspect, and you see to the slaughter?—I order the slaughter and the constable sees to the slaughter.

1899. Do you make *post-mortems* of all the cases?—I make sufficient *post-mortems* to satisfy myself thoroughly that the disease really exists.

1900. To begin with?—Yes, to begin with; but in a case of stamping out, clearing out 40 or 50 pigs——

1901. Would you see all these *post-mortems*?—The animals are sent across to the slaughter-house. I perhaps have not seen the whole of them; but on any large number being sent to the slaughter-house I make it a point to follow up the carcases and inspect them at the slaughter-house, and in any suspicious cases, or out-of-the-common case, I make *post-mortems* on the premises.

1902. How far would you take diseased and in-contact pigs to a slaughter-house, and how do you take them; are they carried?—By floats.

1903. They are carried in floats?—Yes.

1904. Is there no fear of infection on the road?—We cannot do it any other way. I would rather kill them on the place, but that is so very inconvenient.

1905. You told us that you saw a sow that was right at night and dead in the morning, and that that sow died from swine fever?—I have seen a sow that a man told me was right in the evening and was dead next morning.

1906. Did you make a *post-mortem* of that?—I made a *post-mortem* of that sow.

1907. There was no doubt about that?—No.

1908. Did that sow die without any of the ordinary symptoms being developed during life?—Yes; she had the usual symptoms. Mark me, the man said she was considered right the evening before, and she was found dead in the morning.

1909. Tell us the *post-mortem* symptoms?—The *post-mortem* symptoms in these large animals vary considerably, according to my experience, from those in young animals. In young animals you generally have the ulceration and deposition on the large intestines, principally at the ilio-caecal valve, very distinct; but in these large swine which have died suddenly, I do not find that ulceration. In this pig that I speak of I remember her skin was discoloured in the usual way, and her lungs were affected, they were congested. I could scarcely say they were inflamed, but they were much congested, and there was intense congestion and inflammation of the small intestines and of the large intestines also. That was all that was to be seen about that sow, confining ourselves to the lungs and the bowels; there was no ulceration or deposition.

1910. If you did not know that you had swine fever in the herd would you have said that was a case of swine fever, with that history, and that *post-mortem*?—I never thought of taking that *post-mortem* alone; I would not have condemned that place as infected with swine fever on that. I will give you another sample: I remember a piggery that I went to where I found just such a case as that. A big brood sow was lying dead; I opened her and I found that the inflammation in her case had been of longer standing. The mucous membrane was a very dark colour, there was intense inflammation of the mucous membrane of the intestines and stomach, and her lungs were much congested and inflamed I said to the owner, "Well, this looks like swine fever; "but I am not satisfied about it." I counted all his pigs, and took his word that he would send no pig away from his place until I gave him orders. In a day or two we had another case die, and it seemed to me to be an old case of swine fever. I said, "I am "afraid that swine fever is here." In a day or two again we had two or three young pigs bad, and on slaughtering them found the ulcers, and all the characteristic appearances of swine fever, and I at once declared that place an infected place. I must have both pulmonary lesions and intestinal lesions before I say that we have swine fever in the place.

1911. Now, referring to those which you say may die from shock, have you ever made a *post-mortem* in one of those cases?—Yes, I have.

1912. What do you find there?—You do not find very much. There is a slight congestion of the lungs, and slight congestion of the bowels, and that is about all. Very young pigs seem just to die off.

1913. In your examination-in-chief you said that many would recover, but you never gave them a chance of recovery?—I said I believed many would recover. I am told that, but I never give them a chance.

1914. You could not give any percentage of recoveries?—No, but I know every inspector in the County of Midlothian does not do as I do, does not stamp out; and I know cases where the big swine have been left, at least I am told so. I do not suppose there are many of them die.

1915. Not many of them die?—Not many of the large animals die. The large animals, the big swine and boars, generally throw it off. I am told that, at any rate.

1916. Do you think that swine fever is a disease which ought to be treated?—No, I never treat it, I stamp it out.

1917. If you had power you would prevent the treatment of it?—Yes.

1918. You would have general stamping out?—Yes, I would.

1919. Have you ever treated any at all yourself?—I have never treated any.

1920. Have you ever seen any treated?—I have seen them neglected in these cases that I tell you of. A litter of pigs affected was sold off in February, and the result was the spread of the disease.

1921. Have you ever known a case professionally treated by a veterinary inspector?—No, I have never known a case treated professionally.

1922. You have told us that failure of recognition of the symptoms by the veterinary inspector was one of the great causes of the spread of the disease?—Yes, in the instance I gave.

1923. Is it general, think you, all over the country that veterinary surgeons, as a rule, do not devote much attention to swine fever?—I think they are quite willing to devote attention to it, but as swine fever so seldom occurs in their districts, they have not the experience and practice to make them adepts in the inspection of it.

1924. Now, in your treatment of an infected place, you told us that the refuse of the sty, and about six inches of the soil, were taken out and put upon a dunghill and covered with lime?—Yes.

1925. Do you not think it would be very much better if you burnt them?—It comes to this: As I told you, these piggeries occur in groups, and you sometimes find just a little strip of a place; there is a piggery here and a piggery there, and three or four of them together, and there is no convenience for burning the soil.

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1926. You burn all the old woodwork, even the doors; where do you burn that if there is no convenience?—In two ways we burn it. One way we make a fire with the bricks in the ground, and hang the kettle with the boiling water above that, and set fire to the wood along with a little coal. But in general we put on the big boilers that they have for boiling the food, and we fire the boiler with the wood, and heat the water at the same time.

1927. What do you do with the sties which are made of wood?—Burn them, or if worth keeping scald, scrape, wash and tar them.

1928. After you have stamped out swine fever in a place how long do you keep the sty free from pigs?—Thirty days is the statutory time.

1929. After 28 days I believe you may, but not sooner. Do you not keep them longer than that sometimes?—Thirty days after the last pigs are killed we generally let a place be opened. Sometimes I have allowed a week or two longer.

1930. As you act as valuator, you will be able to tell the Committee your opinion as to the present valuation system. Is 4*l.* sufficient for a healthy in-contact pig?—Will you allow me just to recur to the last question. I think that thirty days is short enough time; I have allowed them almost always to re-fill the sties about that time, but I think perhaps six or seven weeks would be a better time than four weeks.

1931. Now the valuation, please?—As to the valuation, I was speaking to one large pig owner the other day, and that was the only objection he had. The only suggestion he could make as an improvement on the inspection carried out was that he thought 4*l.* for a big sow in pig was at times rather little. He would like the maximum extended to 5*l.*, or 6*l.*, or 7*l.* A big sow with pigs in her, if she is a good sow, is worth about 6*l.*, and you may put her down at 9*l.* or 10*l.* with the pigs in her. Now a man only gets 4*l.* for that animal; but on the other hand he gets perhaps full value for an animal which the inspector has passed as healthy, which on being killed at the slaughter-house is condemned; and the one counterbalances the other to a certain extent. Still I advise, if my opinion be taken, that the limit be extended to at least 5*l.*, or, if possible, 6*l.*

1932. You think it should be from 5*l.* to 6*l.*?—Yes.

1933. Would that apply also to diseased pigs, or do you think 4*l.* is ample for the valuation of a diseased pig, half of which should be paid?—I think 4*l.* is ample for a diseased pig.

1934. Then you would have two kinds of valuations: one that no diseased pig should be worth more than 4*l.*, but that healthy pigs might be worth up to 7*l.* Is that your idea?—Yes, if it could be carried out; if it were practical.

1935. In stamping out swine fever have you occasionally slaughtered a pig which was apparently healthy, and yet the *post-mortem* showed well-marked swine fever?—Yes; I remember slaughtering a fat, fine-looking animal, thoroughly healthy to all appearance. We opened that animal afterwards (we opened every animal in the place at that time) and the large intestines were almost filled throughout with the depositions of swine fever.

1936. And yet the animal looked perfectly healthy when alive?—Yes.

1937. (*Chairman.*) Had not the lesion taken place?—Yes. In these cases, sometimes throughout the whole bowels you have on the surface of the membrane a layer of dark yellowish-coloured material like paste, as it were dried paste, covering the whole of the substance of the bowel, the mucous membrane of the bowel. That was the case with this animal, although it looked outwardly perfectly healthy.

1938. (*Mr. Stephenson.*) Do Edinburgh and Midlothian act in unison with each other in making regulations for swine fever?—I do not think it.

1939. They act independently of each other?—Yes they act independently. Of course, the county authority has the privilege to get the animals slaughtered at the Edinburgh slaughter-house.

1940. Have you many suspected cases reported to you, which are found not to be real swine fever?—A few; not very many.

1941. And how about the 150 pigs that you slaughtered for swine fever, nearly all of which you say were tubercular?—I think it was 110 animals that I said I slaughtered and buried.

1942. I have down 150 pigs, nearly all tubercular; it was just at the end of your examination in chief?—That is a mistake; it was 110.

1943. One hundred and ten, all tubercular?—I said that the stock was impregnated with it; almost every one was infected more or less.

1944. Could you diagnose tuberculosis during life there?—In the pigs? No, I could not.

1945. They were suffering from swine fever?—They were suffering from swine fever, and killed for swine fever, and when they were killed for swine fever they were found to be much affected with tuberculosis also.

1946. In any special organ?—In almost all the organs. The lungs, when they were laid on the slaughter-house bench, were just like the lungs of tubercular cows, and the mesenteric glands, and various other lymphatic glands, were much affected.

1947. Have you had any experience of what is now called swine erysipelas, but what we used to call endocarditis?—No, I have not.

1948. You have not seen that at all?—I have never seen swine erysipelas prevail as a contagious disease. I think I have seen one or two cases, but I am not certain.

1949. In making *post-mortems* upon all those pigs that you have slaughtered have you examined the hearts of the pigs?—I have not examined the interior of the hearts, but I have examined the outside of the hearts always.

1950. Is it possible that many of these pigs that you have handled might have endocarditis, and you not know it, if you did not examine the heart?—All the pigs that I have examined I am certain had swine fever.

1951. Do you think they had valvular disease of the heart too?—Whether they had swine erysipelas or not, of course, I cannot say; but I am certain of this, that they had swine fever. I can go another stage further. If a person had examined some of these cases of swine fever, these big swine that I speak of, and found no ulceration in the mucous membrane and perhaps not very much pulmonary affection, they might have been very apt to say that this was a case of swine erysipelas, while all the time it was swine fever.

1952. Who pays for the disinfection in your district, the county authorities, or the unfortunate owner of the pig?—The owner pays for it.

1953. The owner pays for all disinfection?—I was trying to recollect if I had ever a case the other way. I think there were two or three cases where the local authority paid it, but generally speaking the owner pays and does the work.

1954. He does all the work in cleaning?—Yes.

1955. And you burn his place down, as a rule?—I do not burn his place down. I burn all the dirty useless wood that I can lay my hands on, and all the dirty rubbish that I can get; I burn it up.

1956. And you give him no compensation?—They never ask compensation. It is all dirty rubbish; the owners can buy a cartload of wood fit for a pigsty quite handy. They do not object to it.

1957. Your local authority have never made any regulations upon that question, have they?—I think at one time they paid.

1958. You are not very certain about it?—I think they surely did. I recollect now when slaughter was

compulsory—slaughter, of course, at the present time is not compulsory—but when it was compulsory in the county the county paid for the disinfection about *5l.*

1959. (*Mr. Joseph Smith.*) We understand, then, that in your county now the pigs are not all slaughtered?—I believe so. All that I have had to do with however were slaughtered.

1960. I thought you said they were not all slaughtered?—It is not compulsory now; it was not always compulsory when I was acting.

1961. Whom does it rest with?—It rests with the local authority.

1962. And at every outbreak the local authority forms its own judgment on it?—At one time the Board of Agriculture, in the case of swine fever, made the slaughter of all animals in contact compulsory, and it had to be done at that time. Then that order was rescinded, and it was left to the local authorities to decide: they were bound to kill all the diseased, but the slaughter of the apparently healthy was not compulsory, and that is the case now.

1963. It rests with the county authority, does it not?—Yes. When I request permission to stamp out, I suppose the county clerk would consult his local authority and give me permission.

1964. In the past twelve months you say there has been no outbreak in your district?—I have had no outbreak, and I have not seen any cases of swine fever for twelve months.

1965. Do you suppose there have been cases that you have not heard of, or do you think you have been clear?—I think from what the Chairman of the Committee told me the other day, some of the other inspectors have had an outbreak or two. I have had none for twelve months.

1966. You spoke just now of veterinary inspectors; these inspectors are not called in until the pigs are ill. It is not part of your duty, as veterinary inspector, to inspect healthy pigs?—No, not so long as they remain healthy.

1967. You are called in when they are diseased?—Yes.

1968. Or when people think they are diseased?—When people suspect that they have got swine fever they either send for myself or for the constable, and we visit the place. If the constable receives word he tells me, of course.

1969. Your experience is that pigs are diseased, and very likely some have died, before you are called in?—Yes. I have had cases of that kind. There are other cases where people have reported at once; on the very slightest appearance of disease they report. It depends very much on the character of the owners—if they are honest people they report at once; if they are a little the other way, they are, perhaps, not so particular in reporting.

1970. Your experience is that you do not have much swine fever on farms?—No, I have only had one farm outbreak.

1971. And are there many farms in your district?—Yes.

1972. Is it an agricultural district?—It is an agricultural district, and there are a good many pigs in it on the farms; but swine fever has not been prevalent among farm stocks at all except that case I mentioned, and it was carried, I have not the least doubt, to that farm.

1973. You have not spent much time or trouble in tracing the origin of the disease in the case of the different outbreaks?—I have made enquiries, but it is not my place to search out and find out where the disease comes from.

1974. Do you think it is imported from outside the district?—Yes, I think it is imported from outside the district. For example, just now the district is clear, and I have not the slightest doubt it will remain clear until the seeds of disease are brought into it by some imported diseased pigs, or by animals which have been in contact.

1975. You spoke just now of men who were continually buying pigs. Are they more likely to have the disease than those who breed them?—Yes, they are more likely to have it, and, of course, pig dealers, with their carts going about, might carry the disease.

1976. Do you think the management has anything to do with it; do you think that it originates from dirty pig-sties?—I do not think that dirt, or bad ventilation, or defective drainage will of itself produce swine fever. I believe if close dirty places and badly ventilated and badly drained places could produce it of themselves, that we would seldom be free from it; but when the disease is brought in, when the germs are really brought in to these dirty places, then it is just in a congenial soil, and it spreads rapidly from piggery to piggery.

1977. Your experience is that small pigs are more liable to have it than larger ones?—They show it much more, and they are more frequently affected, I think.

1978. You have no pigs imported from abroad into your district, have you?—Not from abroad that I know of.

1979. (*Mr. Carrington Smith.*) What is your area of inspection—the whole of the county of Midlothian, or only part?—Only part of the county of Midlothian. I think there are about six or seven inspectors besides myself in the county of Midlothian.

1980. Your local authority does not order slaughter of in-contact animals without advice from you, does it?—In my case it never did. I have always asked and advised slaughter, and then permission was granted to me. I do not know what would have been the case if I had not asked permission, but when I asked permission I got it. I think it is very likely that our local authority would not have ordered the slaughter unless I had asked. They do not do it now.

1981. There is no standing order?—There is no standing order.

1982. Then practically your local authority allows you a free hand as to the slaughter or non-slaughter of in-contact pigs?—Practically they have; they have just done as I wished.

1983. Are you aware what is the practice in the surrounding districts of Midlothian?—I think it has been very much alike until lately since the compensation has been refused. I think the inspectors used to advise slaughter and stamping out. Of course, I am merely speaking as far as I know.

1984. As far as your knowledge goes, the practice of the various districts in Midlothian is not uniform?—No, I do not think it is uniform. At times it is uniform, but there are no real standing orders for the inspectors to go by. I think the local authority depend very much on the advice of their inspectors.

1985. As I understand you would recommend an impermeable floor in all sties?—Yes, in all sties belonging to these pig-feeders, except——

1986. You would recommend them everywhere—"recommend" I said, I did not say "enforce"?—Yes, recommend I would.

1987. On that arises another question: In case of an infected sty, which has an ordinary brick floor with interstices between the bricks, would not pouring concrete over the old floor make it safe for future use without the taking up of the floor?—I have had cases where the owners objected to lift the floors—such floors as you mention. The way we dealt with them was: we set a man on with a little bit of an iron picker to pick between the seams—to pick them well down, you know. After getting the seams thoroughly well picked out as far as we could, down to the bottom of the brick if possible, we ran scalding water into them, washed them thoroughly out, and then either filled them up with cement, as you say, or with gas-lime and tar, which is almost equally as good.

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1988. Practically that would have satisfied you as inspector if it could have been done ?—It has been done frequently when the owners objected to lift the floors. In many instances I was not able to get the floors lifted, but where I can get my own way I like the floor lifted and the soil taken out from underneath for two or three inches.

1989. You would, I take it, recommend that there be no internal drains anywhere in the pig-sties ?—No; there should be surface drains only.

1990. How long would you keep infected sties which had been properly disinfected unoccupied after disinfection ?—The time that I have kept them is about 30 days.

1991. Is that the minimum time ?—Yes, that is about the time that I have allowed. Perhaps six or seven weeks would be better. The sties have been disinfected and cleaned, and allowed to remain empty about 30 days, and then new pigs put into them, and the disease has very seldom recurred. Thirty days has been sufficient.

1992. Would you recommend an interval of 30 days in case of perfect disinfection before re-occupation ?—Yes, that is the rule just now. It must be 30 days ; 30 days is the least time that can be allowed.

1993. It is 28 days really. Do farmers in Midlothian buy or breed pigs as a general rule ?—As a general rule they breed them, but, of course, they have to buy in their boars occasionally.

1994. Would you pass as fit for human food slight cases of swine fever in the case of a fat pig ?—Slight cases, I think, might be passed as human food. I mean that a slight case of swine fever would not be unfit for human food. It would not do any harm, but, at the same time, it is not the perfectly wholesome healthy pork which the public are entitled to receive in exchange for their money. I might state that carcases slightly tainted with tuberculosis are passed every day of the week in the slaughter-houses.

1995. Would your sanitary authority in Edinburgh pass tuberculous carcases ?—Not severely infected tuberculous carcases, but slightly tainted tuberculous carcases are passed in the slaughter-houses.

1996. By the Sanitary Inspector of Edinburgh ?—Yes. If every animal that was slightly tainted with tuberculosis was condemned, the number of condemned carcases would be very great.

1997. We must confine this to pigs ; of course, I am speaking of tuberculosis in pigs ?—The same rule applies to pigs as to cattle in tuberculosis. All through the country there are big fat bullocks taken to the slaughter-house, and when they are killed there is, perhaps, a slight taint of tuberculosis found in them. If they are slightly tainted these carcases are passed, and if they were not passed a great amount of beef would be destroyed.

1998. Were you surprised to find in this case, where tuberculosis existed to a considerable extent in the slaughtered herd of pigs, the existence of tuberculosis along with swine fever ?—I was very much surprised to find so much tuberculosis among pigs, more especially in this herd of 110, because I never suspected the existence of it.

1999. But with swine fever only, without tuberculosis as a specific disease, you would find considerable affection of the lungs. Is there any difficulty in diagnosing the specific disease of tuberculosis and the infection of the lungs which swine fever pigs have ?—No. I never imagined, of course, that these pigs were affected with tuberculosis—I had simply to deal with swine fever. I was only dealing with the pigs as swine fever infected pigs. When they were opened the tuberculosis was there. I never suspected its existence, and I do not suppose any veterinary surgeon could have detected its existence.

2000. You said that your local authority has always put the cost of disinfection on the occupier. Are you aware that there is power under the Act, if not actual obligation under the Act, to put the expenses of disinfection upon the local authority ?—The system of disinfection that I have mentioned is much greater and more thorough than what the Act requires. I think that all the Act requires is thorough disinfection, thorough cleansing and washing-out of the places, and then whitewashing.

2001. Anyhow the fact remains that with you the whole of the expenses of disinfection have always been paid by the occupier ?—By the occupier, except at the time when the slaughter of in-contact animals was compulsory. I think that the local authority paid it at that time.

2002. Except when ?—At one time there was a compulsory order for swine fever, when every animal in contact had to be killed. Now at that time I think the local authority paid for the disinfection.

2003. But since that time expired ?—Since and before that time the owners have paid.

2004. (*Chairman.*) You said before and since in your opinion ?—Yes ; before and since. I know that is the case. If an owner refuses to disinfect his place, I understand the local authority can do it, and make him pay for it. But that is never done. The owners have always done the disinfection without any bother.

2005. (*Mr. Carrington Smith,*) Would you leave the diagnosis of the absolute existence of swine fever to local veterinary inspectors in case the Board of Agriculture took over the compensation ?—I think the better way, and the most satisfactory plan for all parties, would be to do as in pleuro. Speaking for the county of Midlothian, there are inspectors there quite able to diagnose any case of swine fever ; but in other places, where veterinary surgeons have not had practice and experience, it is better perhaps to have some central authority to whom the organs may be sent.

2006. In case the local veterinary inspector were employed by the Board of Agriculture to diagnose the disease, would you leave the appointment of this local veterinary inspector in the hands of the Board of Agriculture and not in the hands of the local authority ?—I think it would be much better to proceed as is done in pleuro-pneumonia. Let the local veterinary surgeon report to the Board of Agriculture that he has got a suspected case. Let the Board of Agriculture tell that veterinary surgeon to kill that animal and examine it, and send the suspected organs up.

2007. What organs would you regard as absolutely necessary to send up to the Board of Agriculture ?—I think, if local inspectors sent up the lungs thoroughly well marked with swine fever, as they are in most cases, and the stomach——

2008. The stomach ?—I would always send the stomach. You very often find traces in the stomach when you do not find them elsewhere. The lungs, the stomach, the small intestines, the large intestines, a few lymphatic glands, and, to meet Mr. Stephenson's objection, you might include the heart.

2009. That would make rather a large package, would it not ?—No.

2010. How would you pack it up ?—It would not make nearly so large a package as the diseased lung of a pleuro cow. You could easily put it in a small tin case. All the organs that I have named I could send up to London, in case of the existence of swine fever, contained easily enough in a little packet like that. (*Illustrating.*)

2011. Hermetically sealed ?—Yes ; they would be better sealed ; I would seal the swine fever lungs. The pleuro lungs come up any way, of course.

2012. That is a different thing ?—The Board of Agriculture will have to pay for the expense if they take swine fever over, and it is right that they should see the organs. Of course, at the first, as local veterinary surgeons, we did not like to send up the

lungs to London in the case of pleuro ; but after a bit we did not care very much.

2013. (*Mr. Shaw.*) You and other witnesses have laid considerable stress upon rats as vehicles for the conveyance of this disease. Do you propose to take any special way of dealing with rats in these cases ?—I confess I never thought of it.

2014. You mentioned about disinfecting ?—I think it is a very good suggestion. I think the rats should be destroyed.

2015. You mentioned about disinfecting the sties, taking the floors up as cases required, and putting down fresh floors ; but still the rat holes are there ?—Yes.

2016. Have you any remedy in your mind for preventing the rats coming in again through those places ?—That is one of the chief reasons why I suggested coal tar. If you have coal tar and gas-lime and ashes, rats will not touch that. Rats work among soft material, and they dread the tar.

2017. My experience of rats is that cement is about the only thing that will stop them. Do you see any objection to rat holes being stopped by cement being welted into them ?—Not at all.

2018. And, furthermore, a skin of cement put on the walls ?—Yes ; that would be a great improvement.

2019. And it would not be very costly ?—It would cost a good deal in a large piggery. I have confined myself to the floors, but at the same time I quite agree with you, that it would be much better if the walls were cemented three feet up ; but it would be rather an expensive matter.

2020. I presume the expense in these special cases would be dealt with by the authorities, you would hardly expect private individuals to do it ?—If it can be done it is greatly to be recommended.

2021. You referred to 20 pigs which you considered were isolated. Would you kindly say at what distance you consider isolation to be perfect ? —What I mean by isolated cases is simply this : that the piggery was by itself, and there were no others near it.

2022. True, but what distance would it be from the other piggeries ?—Nearly three quarters of a mile from other piggeries.

2023. Three quarters of a mile ?—Yes.

2024. Do you consider that swine fever is frequently carried from place to place by means of hawkers, and dealers, and their carts ?—I have no decided proof, but I think it is very likely.

2025. You think it is probable ?—I think it is probable.

2026. Do you think that stations where boars are kept are liable to be centres of infection ?—Yes.

2027. Would you therefore be in favour of licensing hawkers and registering them, and also registering and inspecting boar stations ?—There are no boar stations near us ; the boars travel occasionally from piggery to piggery, which is even worse.

2028. Quite so, but do you not think that the boars ought to be subject to inspection ?—Decidedly.

2029. Are these travelling boars, as a matter of fact, inspected at present ?—No. Of course, if swine fever is about, they are not allowed to move about very much.

2030. But the sow goes to them, I take it ?—Either way.

2031. If the mountain does not go to Mahomet, Mahomet goes to the mountain, you know ?—Both ways. Of course, whenever swine fever is in a district, I warn the parties against that ; not to have any movement ; to buy in as few pigs as possible, and no movement, which, of course, includes the boars.

2032. You referred to licences for men who are pig feeders. I presume you would make the cost of the licence simply of a nominal amount ?—Just a fraction, and I would make the local veterinary inspector judge as to whether the place is in a sufficiently good state, or right state, for a licence.

2033. In the case of these pig feeders do you refer to pig feeders in towns, or do you refer to pig feeders who would be in villages, and that sort of place ?—All are in villages in my district. I am a county inspector, not in a town. *Mr. Cornelius Cunningham.* 9 March 1893.

2034. But in isolated places like farms you would not enforce licences ?—No, I do not think there is any need for enforcing licences at farms. I am referring to farms in my own district ; there might be some reason for licensing farms in other counties.

2035. You mentioned that, according to your impression, the disease, is most rife from September to the end of the year ?—Yes, from September.

2036. That is the time of year when you consider it most rife ; have you not got swine fever in the warmer months of the year ?—Yes, but I think the beginning of these outbreaks is generally the fall of the year. I may just give you an example. These fourteen outbreaks that I had began in September, but we had them on to the month of March.

2037. I understand that Midlothian is a very large potato growing district ?—Yes.

2038. Can it be that the outbreak of disease is caused by the movement of pigs which are bought by various farmers and pig feeders, on account of the approach of the time for digging the potatoes ; the farmers and pig feeders are then buying stores for the potato digging ?—That may have an influence over it, but the idea that I had was this, that the fall of the year, and the close, damp weather, is more favourable for the development of the germs.

2039. You mentioned about an Irishman who had certain pigs diseased. Did he report his pigs ?—He reported his pigs after his neighbours' became infected. He hid the disease as long as he could, and when his neighbours' became infected he reported it.

2040. Did he, with the reputed recklessness of his race, sell those pigs as stores ?—I do not know. I cannot say what he did.

2041. Did he sell those pigs in the market, or how did he get rid of them ?—I do not know where he put them. The man had a piggery of about 35 pigs, and when he reported he had only five alive and they were all diseased. The plain inference I drew from that was (and of course his neighbours told me) that the man had had swine fever and had hidden the disease.

2042. Was the man punished for that ?—He was summoned to the Court and if I had not been there he would have got off. He pleaded his cause very well, like an Irishman, but he was convicted.

2043. You mentioned about those diseased pigs being taken to the abbatoirs in floats ?—Yes.

2044. Are those floats disinfected afterwards ?—Yes, I believe they are, they belong to the city ; they do not belong to the county.

2045. Supposing there is a brood sow having a litter of ten, which litter we will say is three weeks old ; the sow weighs 336 lbs., how would you gauge her value ? You would value the sow at so much, and what would you value the pigs at, they being a fortnight or three weeks old, they would hardly have a market value, as they are on the mother ?—It depends on the kind of pigs they are ; if they are little wretches I value them at 5*s.* each.

2046. Suppose they are a very nice pretty little litter of ten which a big sow has had ?—If it were a sow with a good litter I should value them at 10*s.* each.

2047. Then they would have a market value ?—If they are not healthy-looking things he gets 5*s.* each, if they are healthy he gets 10*s.* It would be 5*s.* up to about a pound, according to their age and condition.

2048. (*Sir Jacob Wilson.*) You referred to a case, not within your own knowledge, but of what you have been informed, of a Scotch county in which no action was taken on an outbreak of swine fever ?—Yes ; no regular action I meant ; not the action required by the law.

2049. I will not ask you anything more than this with regard to that question ; does that county happen

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to be on the seaboard of Scotland ?—What do you mean by the seaboard ; excuse me asking the question.

2050. I mean by the seaboard a county which extends up to the sea, which has a sea frontier ?—Well, it is not far from the sea.

2051. (*Mr. Wardlaw Ramsay.*) Does it touch the coast ?—If you will hand me a map I can tell you at once.

2052. (*Sir Jacob Wilson.*) Look at that map and see if you can trace whether the county extends to the sea ?—(*After looking at map*) It does not reach to the sea.

2053. How long ago is it since you received the information of the last outbreak in that county ?—I could give you the date when I received the information.

2054. Cannot you tell how long before that it had taken place ?—No, I could not.

2055. Will you tell us when you received the information ?—Yes, I could give you the date when I see my books.

2056. I only want it approximately ; You can put it in your proof afterwards ?—Yes, I will. It was on the 9th of January last.

2057. In the year 1893 ?—Yes.

2058. Was it your impression that it was during the year 1893 that the outbreak had taken place ?—I could scarcely answer that question. I did not pay much attention.

2059. It did not convey any importance to your mind then ?—It did convey very great importance to my mind. I was very much surprised to hear that any county did not take notice of swine fever and did not pursue the usual course with it, but as for the actual time when the last outbreak occurred I really did not ask particulars as to that. I was almost thunderstruck, as the saying is, when I heard it.

2060. You are aware that there are many other counties in England besides those mentioned in Scotland which take no very definite action, are you not ?—No, I am not aware of it.

2061. You are not aware of it ?—I am not aware of it.

2062. Of course living and practising in Midlothian you have considerable knowledge of the port of Leith ?—Not very much knowledge of the port of Leith.

2063. But you know Leith ?—Yes, I know Leith perfectly, and I know the inspector in Leith.

2064. And you know that certain imports of stock take place at Leith ?—Yes.

2065. An opinion has, I believe, existed in the minds of some people, that Scotland derives much of its swine fever from Ireland. Is that your opiuion ?—I have no data upon which to form an opinion in that way. I must say that there are not many Irish pigs near Slateford that I know of, and I do not think that my district receives very many Irish pigs direct.

2066. Then you cannot give an answer to the question ?—I cannot give an answer to that.

2067. I gathered from your reply that you do not consider it your duty as a veterinary inspector to trace the disease to its origin ?—No.

2068. But on the other hand do I understand that you regard it as the duty of the police to do so ?—Yes, I would say so.

2069. Is it the practice in Midlothian that the police do so ?—That they trace the origin ?

2070. That they endeavour to trace the origin of the disease ?—No I do not think it is, as far as my knowledge is concerned, but I am not of course aware of the real action of the police.

2071. What is the procedure in your district ? Do the police in the first instance inform the inspector of an outbreak of disease ?—Yes they do. I presume you mean at the present time in my district.

2072. Yes ?—The police inform me.

2073. And that is the usual form of procedure throughout the county is it ?—Yes, they report to me and they report to headquarters at once.

2074. Whereupon you make an inspection and also report to your headquarters ?—Yes.

2075. And the headquarters you refer to are your local authority ?—Yes, and they are under the Board of Agriculture.

2076. You have been asked some questions about pig feeders ; when you use the term "pig feeders" do you refer to feeders on a large scale ?—Pig feeders I consider to be men who keep pigs for the sake of making a living whether they keep a few or many.

2077. Do you regard a poor man's pig, a cottager's pig, as coming within that category ?—No, I would not consider a cottager to be under that category. One pig will not keep a cottager. I mean men who keep pigs for a living.

2078. I see. That would leave your definition of a pig feeder to depend upon his having a sufficient number of pigs to keep him, that is, pigs from which he derives his livelihood ?—Yes.

2079. You have said that in your opinion immunity from disease upon the farms in Midlothian is due to the fact that pigs are chiefly bred on the place, and that other pigs are not imported into it ?—Yes, that is the only reason that I can give.

2080. In the case of the large pig-feeder and in the case of the poor man, each has to buy his pigs from some source ?—Yes.

2081. But you would only propose to licence the piggery of the large feeder ?—No, I would not ; that is not what I meant. These piggeries as I tell you are simply in groups. There may be one big pig feeder, a man with perhaps 200 or 300 pigs, and his very next door neighbour may be a widow, or an old man who cannot work very much, but who keeps perhaps five or six or a dozen pigs. Both are equally pig feeders. The one is a large owner and the other a small owner of stock, but they are equally pig feeders depending on the pigs for a living, and I would licence both of them. But in the case of a cottager or of a farm servant who keeps a pig to eke out his wages and such like I do not see that there is any need for a licence.

2082. I want to get from you where you draw the distinction, where a licence should be required, and where there should be exceptions ?—It should be required in these groups.

2083. You say it should be required where pigs are in large groups ; is that what you mean ?—I have farms in my district, and I do not think there is any need of licensing those farms. I have cottagers and farm servants with perhaps one pig. I do not think there is any need of licensing them. Then you get perhaps a working man with a pig or two in a village, I do not think there is much need of licensing in that case, but wherever you have them in groups and where they are keeping pigs regularly throughout the year, and buying and selling, I would have a licence.

2084. Supposing this farm servant whom you referred to happened to be living close adjoining to a group ?—I would put him in.

2085. You would ?—I would, decidedly.

2086. Do you happen to have in your district any large collieries ?—No.

2087. Have you any large dairies ?—Yes.

2088. Are pigs kept in large numbers in connection with those dairies ?—In one or two cases they are.

2089. Do you consider these are common sources of disease ?—They are generally, and just as in the case of these groups of piggeries I would licence them.

2090. Is it your experience that much of the disease in Midlothian has unfortunately been brought out of Edinburgh city ?—My idea is that the outbreak that I mentioned to you in 1885 was plainly brought out of the city.

2091. That is your opinion ?—Yes.

2092. You have said that you recommend, and your

practice is that any animals which are not fit to be sold as human food should be slaughtered and buried ?—Yes.

2093. Do you regard that as being attended with any risk ?—It depends on where they are buried. We have been compelled to bury them in places where I would never have buried them if I could have done otherwise.

2094. Do you make special conditions as to the manner in which they shall be buried ?—Yes, they are of course buried, according to the Act, six feet deep with lime above and lime below.

2095. Have you ever heard of instances of these carcases being brought up by dogs ?—No, not in my district, but to these clusters of piggeries there is very little ground attached. Occasionally we have had to dig a big hole in the centre of these small piggeries six feet deep, and put the animals in, which is a very reprehensible practice, I think. To obviate that we have generally now-a-days killed them, and sent them in dead in a float to the slaughter-house, where they are burnt up.

2096. Under the local authority for Midlothian, there are several inspectors employed, are there not ?. Yes.

2097. And in consequence there is no uniform sytsem of administration, is there ?—I think it is pretty uniform.

2098. (*Mr. Wardlaw Ramsay.*) Might I ask whether in saying that the practice in Midlothian is not uniform —owing to the local authority asking, and taking the advice of the local inspectors—you do not mean us simply to infer that the local authority takes each case upon its merits ?—Yes, to a certain extent. My outbreaks occurred twelve months ago, from September to March. I was allowed to kill the whole of the pigs, and to stamp out. I have had no outbreaks since. In the case of the few outbreaks which have occurred in other districts, a different system has been pursued. The diseased animals have been killed, and the apparently healthy allowed to remain. Of course it comes practically to this, that if I had had outbreaks when there was no compensation paid I should have been unable to have stamped out.

2099. (*Sir Jacob Wilson.*) You have given a very good reason for your administration, which seems to be admirable, as the results show. I only want to bring out this in support of what you said, to the effect that there is no uniformity, and that therefore there is a danger in consequence ?—There is, certainly. There should be the same as with pleuro, one law for the whole country—one uniform rule.

2100. It is as dangerous for a want of uniformity to be within the county itself, as for a want of uniformity to be among the counties in the country at large ?—Yes. Here is a county enforcing stamping out at the beginning of 1892, and then because the compensation is too heavy on the ratepayers, discontinuing it.

2101. Is it your opinion that slaughter alone is ample as a means of stamping out the disease ?—Slaughter of course first; but the thorough disinfection and destruction of the germs is the great thing.

2102. You regard of very great importance, too, certain judicious restrictions on movement ?—Yes.

2103. Do I sum up your opinion when I say that the most effectual means of stamping out the disease would be compulsory slaughter, with compensation, and judicious restriction in movement and improved sanitary precautions ?—Yes, decidedly.

2104. That would embrace the whole ?—Yes.

2105. And you would desire to see that administered through a central authority ?—Yes, I would.

2106. Now, just one question here, what becomes of the product of the diseased carcases after the boiling to which you refer ?—They go to the city, they pass out of my jurisdiction after that. They have a furnace at the slaughter-house, and the inspector tells me that the pigs are thrown into this furnace and burnt.

2107. In answer to questions about infected areas, you said that each case was to depend upon its own merits ?—Yes.

2108. Now, I take it that the certificate or declaration of an inspector creates an infected place at once ?—Yes.

2109. Then, upon the report of the inspector, the local authority meet and extend that infected place according to circumstances ?—If they consider it necessary.

2110. Of course I assume that. Now no area can be created by a local authority ?—No, no area, they have to request permission from the Board of Agriculture for that.

2111. Failing that if anything further has to be done the local authority have to communicate with the central authority, and the area can only be granted by the Board of Agriculture ?—Yes.

2112. Now, have you ever known a case in which the local authority has made such application ?—Yes.

2113. In any case of swine fever ?—Yes. I recommended the making of an infected area on two or three occasions. I drew up the limits of the area and laid them before Mr. Balfour, the clerk, and he reported to the Board of Agriculture, and got their sanction for that area to be made. There was one at Corstorphine, and one at Gorgie. He got permission from the Board of Agriculture.

2114. (*Professor Brown.*) You said, in answer to one of the early questions, that it is very necessary to make certain that the disease exists ?—Yes.

2115. Will you tell the Committee what sign or signs you would accept yourself as proof that the disease does exist ?—I have already answered that question, I think. I must have the real swine fever lungs, and I must have the real swine fever bowels.

2116. I want to know what is the mark in the bowel which would indicate to you that it was a real swine fever bowel ?—The ulceration, or deposition of the peculiar swine fever matter.

2117. That form of exudation which is commonly called diptheritic, do you mean that ?—I just mean the common swine fever appearance ; everyone knows it from a practical point of view.

2118. (*Sir Jacob Wilson.*) We want to know what the swine fever appearance is ?—If I had known I would have brought a specimen up here.

2119. (*Professor Brown.*) Do you know what is meant by a diphtheritic exudation ?—A diphtheritic exudation would be the exudation of diphtheria as I understand it.

2120. No, it would not be so necessarily at all, "diphtheritic" is an adjective ?—Will you just explain it.

2121. It means that it is a deposition somewhat resembling the deposition which is found in diphtheria ?—Unfortunately I have not seen that deposition.

2122. You do not use the term ?—No, we do not use that term.

2123. Then I may judge by what you say that it is that kind of exudation which you mean by the pasty deposit ?—Yes, the pasty deposit, and the ulcers on the ilio-caecal valve we almost always go for first. You can generally tell before you open the bowel whether it is swine fever or not. But I have never declared a place yet to be affected with swine fever until I have found that deposition or the ulcers at the ilio-caecal valve.

2124. In addition I understand you to say that you expect to find disease in the lungs ?—Yes, but if I have the ulcer I am pretty sure of it.

2125. If you have the characteristic ulcer you would not care to go any further ?—I always go further.

2126. If a piece of intestine about two inches square was sent to you, and the characteristic swine

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fever ulcer were present, would you on that piece of intestine arrive at the opinion that it was swine fever?—Yes, I would.

2127. That is what I understood?—That is what I would do.

2128. I gather from a part of your evidence that you would be disposed to recommend in every case that the central authority should decide as to the existence of swine fever?—Yes, the same as in pleuro-pneumonia.

2129. Are you aware that when that was first ordered in regard to pleuro-pneumonia there was a very great opposition from the Scotch veterinary surgeons?—Yes, myself among the number. I thought it was a little derogatory to ourselves, but after a bit we did not care very much.

2130. Now I suppose they recognise that it is merely in the ordinary course of professional procedure?—Yes, they do.

2131. Those who have to give an opinion as to what should be done in a certain disease are bound to have the evidence before them, which would enable them to say that that disease exists?—Yes.

2132. And it is not an unfair thing to do with regard to pleuro-pneumonia?—No, I have always found the Board of Agriculture acting very fairly towards me in regard to pleuro-pneumonia, and I have no objection to send the organs up. Of course, I sent them up at first, very much against my will.

2133. Although there are a considerable number of men who would be perfectly competent to decide any cases of swine fever, there are also a considerable number who would not be?—Yes.

2134. And it would be more satisfactory for a central authority to deal with those cases, than to select a certain number of veterinary surgeons who should be judges in different parts of the country?—Yes, it would be far better to have one central authority, the same as in pleuro. Of course, there are plenty of people in Scotland quite able to decide the existence of swine fever, but if the Board of Agriculture has to pay the money, I do not see why they should not themselves decide it.

2135. You say that it is not the duty of the inspector to trace outbreaks of disease?—No, it is not, strictly speaking.

2136. That is quite right. I wanted you to say flatly, no?—No; we of course act under the Act, and there is no clause in the Act, enjoining us to trace out the disease.

2137. Clearly, "no" was the right answer?—I have given you, however, an instance in which I took pains to trace it out.

2138. If the inspector were instructed by the local authority to make an inquiry, he would probably do it?—Yes.

2139. And he would also charge for it?—He would be quite entitled to charge for it.

2140. But as the matter stands at present, if he made the inquiry without the instructions of the local authority, and spent several days in making that inquiry, he would not get paid for it at all?—Our local authority is very fair in that way. If we can show them that we try to do everything we can to trace out disease, or to help in any way to put down disease, and lay a plain statement before them, they will pay us. But they are not compelled to pay us, of course.

2141. It comes to this, does it not, generally over the country, that the local authority would decline to pay for services which they had not ordered to be rendered, and which the inspector was not bound, without orders, to render?—Yes, other local authorities, I believe, would not pay. Our local authority would.

2142. You think your local authority would?—I think so. I have always found it paying everything I wanted if I would give them a good reason for it—even above the ordinary charge. But I believe there are other local authorities who do not act in that way. Our local authority have always dealt very liberally with their inspectors—I must say that—very fairly. They are very anxious to put down disease in any form when we come across it.

2143. You have said that, in one particular outbreak there were about 110 pigs, the majority of which were tuberculous?—A great many were tuberculous.

2144. You said that the lungs of those pigs reminded you of the lungs of a tuberculous cow?—Yes.

2145. Do you mean that there was any grapy deposit?—Yes, plenty of it. I never saw the lungs so like them anywhere.

2146. You do not happen to have preserved any of those lungs, do you?—I think there is some preserved, but not by myself.

2147. Are you aware that there is no case on record of the grapy deposit except in the lungs of the ox?—There were grapy deposits, and masses of deposit.

2148. That is not an answer to my question: are you aware that there is no case on record of any grapy deposit on the lungs of any animals other than those of the bovine kind?—I suppose you mean by the grapy deposits, the little nodules grouped together.

2149. Yes, and hanging from the membrane?—Perhaps not hanging from the membrane, but they were impacted into the substance of the lungs.

2150. I do not mean that. Your answer should be that there were not the grapy deposits. There were no bodies like clusters of grapes hanging from the pleuro-membrane, attached by a thinner layer of membrane like a cluster?—Of course that is drawing a distinction. There were masses of tubercular matter in the substance of the lungs, and on the serous membrane, and I think that I have seen that form of grapy deposit in one case of tubercular disease in a horse, tuberculosis being uncommon in the horse.

2151. (*Chairman.*) Is it your opinion that it would be desirable to make the principle of the Public Health Act apply to the keeping of pigs; I mean, would you think it a proper thing to do with the nuisance which would arise to the human being from keeping pigs, and which, in itself, would be a reason for preventing the keeping of pigs under those particular convictions, that the principles of the Public Health Act should also be extended to those cases in which it could be shown that the keeping of pigs was likely to lead to the spread of disease among the pigs themselves?—Yes. At the present moment the Public Health Act gives the sanitary inspector very little power. There are a good many places where pigs are kept where they should not be kept, but the sanitary inspector has no power under the Public Health Act to cause their removal unless a medical man certifies that they are injurious to health.

2152. That is to say, unless it can be shown that the keeping of pigs is injurious to public health?—Yes.

2153. I understand you to say that you would extend that principle to the keeping of pigs under conditions which would be injurious to the health of the pigs in relation to contagious diseases?—I scarcely understand the question.

2154. The question is this. Would you make it a condition that a pigsty should be kept in such a manner, not only that it was not injurious to the health of the man, but that it was not injurious to the health of the beast?—It should be kept in such a way that it is neither injurious to the health of the man, nor to the health of the beast.

2155. (*Mr. Wardlaw Ramsay.*) There is just one other question which it has occurred to me it might be worth while asking. Do you know of the existence of any large herds of pigs near to your district. May I ask, is Corstorphine in your district?—Corstorphine is very near Slateford; but I never inspected Corstorphine.

2156. Are you aware of the existence of any large herd or herds of pigs at Corstorphine?—Yes.

2157. Are you aware that there has ever been any swine fever there?—Yes, there was swine fever in Corstorphine about the time that I had my outbreaks.

2158. Is there more than one large herd at Corstorphine?—Yes, there is a cluster of piggeries there.

2159. Do you know one herd of 400 to 500 pigs in Corstorphine?—The average number of pigs at Broomhouse, if that is the place you are referring to, during the last two years has been 250. Broomhouse is in my district.

2160. Is it the case that there has never been swine fever there?—There has never been swine fever there to my knowledge.

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2161. The point I want to get at is that we have a herd here, quite close to your district, where all this swine fever occurred—a very much larger herd than any that you have had to do with, in which swine fever has never been?—I think you must qualify that. I do not think there were as many pigs on that place as you say. Broomhouse is isolated at a considerable distance from Corstorphine, and Swanston, again, is another place where there are a great many pigs, and swine fever has never been there.

2162. Do you attribute that immunity to the fact that the owner at Broomhouse breeds his own pigs, and does not go to market for stores?—Yes.

[The Witness withdrew.

Adjourned for a short time.

MR. JOHN DOBBIE, called in; and Examined.

Mr. John Dobbie.

2163. (*Chairman.*) I think you acted as Chairman of the Contagious Diseases Committee of the county of Midlothian for a period?—I did.

2164. In that capacity you have naturally given attention to the whole of the matter which you know is the subject matter of our enquiry?—That is so.

(*Chairman.*) I might mention to you that we have already had evidence in regard to your county, but there are certain special points which may require a little further elucidation, and for that reason I am going to ask a member of this Committee, who is conversant with your district, to proceed with your examination, because I think he will bring out those points, perhaps, better than I should.

2165. (*Mr. Wardlaw Ramsay.*) I shall be glad if you would give to the Committee a short narrative of the mode of procedure adopted by the Contagious Diseases Committee in Midlothian with regard to outbreaks of swine fever from the time that the local authority gets intimation of an outbreak?—I think the first process is telling the policeman, and the policeman tells our local inspector.

2166. That is, the person who has the diseased animal or the suspected animal, tells the policeman?—Yes. Then the local inspector makes the place an infected place.

2167. Who is it gives the information?—The owner of the pigs, as a rule, tells the policeman, the policeman tells the local inspector, and the local inspector makes the place an infected place, if it is a true case of swine fever, as it is frequently.

2168. The local inspector does?—Yes, according to the Act.

2169. I want to get what the successive events would be?—Some of those piggeries are contiguous to one another, and an infected place is likely to be three or four piggeries.

2170. After it is reported to the police what is done?—It is reported to us, and that place is made an infected area.

2171. An infected place?—We take in more than the place.

2172. You may use the word area, but it probably is not correct as far as swine fever is concerned. Has the action of the local authority been uniform in all cases of outbreak?—No, it has not.

2173. Would you please tell us why?—I suppose I was principally the cause of it. The amount of slaughtering which took place in Dalry Meadows and Gorgie District—that is, the serious outbreak between November and February ——

2174. That would be the one that Professor Walley gave evidence about?—Professor Walley has nothing to do with us whatever. The swine fever was so prevalent in that district that we carried out the old *régime* of slaughtering out, principally in Mr. Cunningham's district. He gave a very fair compensation, so that there might be no inducement to hide the disease at all events, and I think the people that had the disease were fully compensated. He slaughtered the whole lot out in some cases, I think, and burnt the sties, and new ones were put up, which made a distinct radical change, no doubt, in the immediate vicinity. But the change was also very radical in the accounts, so much so that when the accounts came to me I was alarmed, and I called a special meeting to consider the matter, and we resolved there and then to stop slaughter. The immediate cause of our coming to that decision was (perhaps it may not have to do with this swine fever inquiry) complicated. I had better cite one or two cases; that will be the best way of explaining the matter. The slaughter was stopped, I can assure you, not on account of our thinking the disease was not contagious by any means, but simply because we found we were losing this money in a most extraordinary manner. I will give you one case as a principal cause of our adopting this plan. We had in a single case 231 pigs in one owner's possession; we gave 302*l.* 15*s.* for compensation, and we received the glorious sum from the Edinburgh slaughterhouses of 66*l.* 17*s.* That was a total loss to the local authority of 235*l.* 17*s.*, there or thereabouts. That was a staggerer in the first case. In a very short time after that there was another case almost similar, where we had 120 pigs, and we paid 212*l.* of a claim and received 73*l.* 13*s.* of compensation, leaving a dead loss of 138*l.* 18*s.* 9*d.* Getting those figures was, of course, rather a staggerer. I went to the City Chambers, and I saw the Inspector of Slaughterhouses. This 73*l.* in the second case I speak of here, for which we paid 204*l.* represents in our valuation 204*l.* of healthy pigs, not diseased ones, remember; this 73*l.* that we got was for the 204*l.* of healthy pigs. How does it come out that our inspectors consigned 204*l.* worth of healthy pigs to the slaughter-house, and we only got 73*l.* back? No doubt in some the disease might be latent, but I had very grave doubts of something else. The other case, of course, was a little bit worse; we had but 66*l.*, and the loss on the valuation of the healthy pigs in that case was 235*l.* I asked the inspectors of the slaughter-houses, and I told them I thought in the first place the disease came from the city. It was an unfortunate thing for me to say, because it raised their dander against me to begin with, and the next thing was they said a great number of those pigs were condemned for tuberculosis and not for swine fever; consequently, if we have 100 pigs and two of them have swine fever, the chances are that we run into 98 pigs for compensation with no swine fever at all, but with tuberculosis, and

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the county has to pay the loss. When I got this information of course we stopped the slaughter. I said, "There is no earthly use going on in this way"; and we resolved to let them alone. We killed the diseased pigs according to the Act, and gave the owners compensation for them, and we allowed the rest of the pigs to remain alive.

2175. (*Mr. Carrington Smith.*) You did kill all the diseased pigs?—Yes.

2176. You need not have done, of course?—We always did it. We killed the diseased pigs and buried them, and gave compensation for them, half value.

2177. (*Mr. Joseph Smith.*) Since when?—We have always done that, but we stopped this compensation business in February, or somewhere thereabouts.

2178. (*Mr. Shaw.*) A year ago?—It would be about February, 1892; or March, 1892, I fancy.

2179. (*Mr. Carrington Smith.*) When you stopped compensation for in-contact pigs?—When we stopped slaughter for in-contact pigs.

2180. (*Mr. Wardlaw Ramsay.*) You killed the diseased animals?—We killed the diseased animals, and we valued them, and we gave the half-value of 4*l.*, which was the maximum; that is, 2*l.* they got. We allowed the owner to let them die out as he chose and kill and bury as they went on, or else, if he chose to kill them out and send them off to a market, so much the better, and we gave him a hint that that would be to his advantage. The only thing we did was this: We could not compel the owner to kill and sell, but we could prevent the stocking even beyond the 28 days or the 30 days which we fixed. Since this stoppage took place there are one or two facts here which I might mention. In a piggery of 42 pigs there were 25 of them affected and killed and buried; the rest remained alive, and were sent to Glasgow and elsewhere. We just paid for 25, and the man took the risk of the rest.

2181. (*Mr. Carrington Smith.*) They went to Glasgow?—This lot went to Glasgow particularly. They were sold to a wholesale butcher in Glasgow. He came and dressed them, and sent them to a Glasgow slaughter-house. In another lot of 56 pigs there were 28 diseased, which were killed and buried; the rest remained, and went on as usual. In another case, out of 101 pigs, 44 were diseased and were killed, the rest remained on; and in another lot of 140 pigs 30 of them were diseased and paid for, and the rest of them remained in the owner's hands.

2182. (*Mr. Wardlaw Ramsay.*) I think that is enough so far as that is concerned. You stopped the slaughtering of these in-contact animals purely on account of the expense to the ratepayers?—Distinctly so.

2183. It is a little further that I want you to go in regard to the uniformity or non-uniformity of action of the Contagious Diseases Committee?—When I speak of the expense to the ratepayers I think we were doing as much good in one way as the other.

2184. Can you tell us how many inspectors there are in Midlothian?—We have eleven.

2185. Is the action of the Contagious Diseases Committee uniform in all cases; do they treat each outbreak in the same way?—Mr. Cunningham was the most stringent in the slaughter. Mr. Cunningham has a "fad" about the slaughter business.

2186. Are we to understand that the action is not quite uniform; that it depends to some extent upon the local veterinary inspector?—To a certain extent. You must understand this: During the time of wholesale slaughter the slaughter was general.

2187. Have the local authority of Midlothian any regulations as to the slaughtering of pigs now?—None whatever. It has rescinded the slaughtering; we are simply killing the diseased pigs, and we pay compensation for diseased pigs according to a tariff of our own, which is 4*l.* maximum, and we allow the rest to go on. If they have it a second time we deal with that and the same thing goes on again.

2188. They have no variety there?—It is uniform in that way.

2189. Will you please tell us what powers the local inspectors have?—They have none whatever.

2190. They have no powers?—They have no powers whatever. Our sanitary inspector, under the Public Health Act, has an idea that he can go anywhere.

2191. The local inspector has no power of slaughtering animals on his own initiative?—He has no power of knowing that the disease is there.

2192. With reference to the duties of the police, to what extent do the local authority use the police?—Only as a sort of interim between the owner and the veterinary.

2193. Have the police ever been used for tracing an outbreak of swine fever?—Not to my knowledge.

2194. Has there been any attempt on the part of the Local Authority to trace swine fever outbreaks to their original source?—Not that I am aware of, further than when an outbreak takes place in Edinburgh it is very easy to find out, and if you ask a man where his pigs come from you find they universally come from town. The universal opinion is that the disease is first of all in the breeding establishments within this narrow area of Edinburgh. Swine fever is a comparatively unknown thing outside of four miles from the city.

2195. You said it came from the city?—The latest case we had ourselves was at Greenend, where a man bought six pigs. In three weeks after that the disease broke out. Before he reported it he sold his own pigs. These pigs were sold to some six or eight different places, and we had about half a dozen outbreaks in consequence of that, and these pigs came from——.

2196. From the Edinburgh market?—Yes.

2197. In your experience have you any knowledge of any other source from which disease has come into the county?—Not the least.

2198. Then I want to ask a few questions in reference to compensation. Do you consider that the present scale of compensation is satisfactory?—To a certain extent it is; not wholly. It is a very fair compensation for a certain class of pigs.

2199. Would you please tell us how much compensation is paid first for diseased and second for in-contact animals or has been paid in Midlothian?—In the year 1892 we had 19 outbreaks altogether; there were 783 pigs slaughtered, and they cost 1,059*l.* 6*s.* We received 221*l.* 14*s.* of compensation for the carcases, making a total loss of 837*l.* 12*s.* We have an additional expense to that and that is our veterinaries. Our veterinaries' account for the same year is 145*l.* 5*s.*, which ought also to go against the swine fever.

2200. (*Mr. Carrington Smith.*) How about the police; are they paid?—The police get a certain amount of county council payment for county council work as a lump sum. They get nothing that I am aware of individually.

2201. (*Mr. Wardlaw Ramsay.*) Not for dealing with individual cases you mean?—No.

2202. And do they get a certain amount?—Yes, but I forget what the amount is just now.

2203. Merely for the use of their services in reference to contagious diseases?—Their services to the local authority.

2204. With reference to the question of compensation, what amount of compensation would you consider fair?—The 4*l.* maximum is a very fair compensation for what we would call a fat pig, but it comes very far short of compensation to a man who goes in for breeding, if he has a breeding sow worth perhaps 7*l.* or 8*l.*, she may be going to have a litter of ten pigs in a week.

2205. I am speaking of a diseased animal now; you think it should be raised?—I think in that case

there ought to be a certain margin allowed to a valuator, most distinctly.

2206. Then for an in-contact pig can you give any sum which you consider would be fair?—For a man's healthy pigs.

2207. Yes?—They ought to give the proper value.

2208. Either get a money sum or a proportion of the value of the animal?—I do not see how you could give them less than their value.

2209. And then for in-contact pigs also if they were slaughtered?—I am speaking of in-contact pigs. I do not see how you can go into a man's yard and value his pigs under market value.

2210. I beg your pardon; now for diseased pigs, what do you think would be fair?—They are only getting half value just now.

2211. Do you think that is enough?—It is not a great deal. I do not say it would be enough if they were getting bare valuation for in-contact pigs, but the good valuation they were getting from Mr. Cunningham for the in-contact pigs would help to cover the loss on the diseased pigs.

2212. Therefore, you think that the amounts for in-contact pigs should be raised?—To the market value; and the amount for diseased pigs ought to be raised under special circumstances.

2213. (*Mr. Stephenson.*) By "in-contact pigs" there, you mean diseased pigs, do you not?—No, I mean healthy pigs. We pay compensation for the diseased pigs also. Mr. Ramsay is asking what compensation is being given for diseased pigs.

2214. (*Mr. Wardlaw Ramsay.*) And you say half?—Yes, for the compulsory slaughter.

2215. (*Mr. Stephenson.*) Half of the full value, or half of 4*l.*?—Half of 4*l.*

2216. (*Mr. Wardlaw Ramsay.*) The limit is 4*l.*?—The limit is now 2*l.*; it is 4*l.*, but they only get the half of it.

2217. (*Mr. Carrington Smith.*) For diseased pigs?—For diseased pigs.

2218. (*Mr. Wardlaw Ramsay.*) I mean a limit of 4*l.* for the full value. As for anything that is paid for disinfection, does the local authority pay for the disinfection?—They have not done so.

2219. They have never done so?—Not in regard to pigs; they did so in pleuro but not in swine fever.

2220. Would you recommend that it should be so, that the owner should be compensated when they have the disease?—To a certain extent. I would not exactly free the owner of all liability, but I think to a certain extent he ought to be assisted.

2221. Now, from your experience of how things work, could you make any suggestion to this committee as to what you would propose supposing the Board of Agriculture was to take over the control of swine fever. Is there any suggestion that you could make to us in a few words, as to any improvement upon the administration?—I think they ought to be licensed, and they never will be quit of swine fever until they are licensed.

2222. Do you mean that piggeries ought to be licensed?—I go a bit farther, I say that every man who has a pig ought to have a license for the place, before the pig is put into it, and I would not exempt even farmers from that.

2223. Farmers and all?—For the simple reason that with the dairy trade you limit the sale of milk, but you cannot do that with pigs, because a man with two pigs is just as dangerous as a man with 100 pigs.

2224. Would you consider it advisable that the Board of Agriculture should take control of swine fever and pay the compensation if compensation is paid, out of the Imperial fund?—Certainly, so far as the compensation is concerned, by all means, but when you speak of taking control, do I understand it to mean doing away with all local inspectors.

2225. You put it as "doing away with local inspectors;" that might be or might not be; it would be for the Board of Agriculture to settle that. I do not mean that there should be any intention of doing away with the assistance of the local authorities?—I do not understand the meaning of taking the management. I do not know how you intend to manage it.

2226. What I want to get at is that there is a feeling about this question of employing the local inspectors as the veterinaries to decide the question, to diagnose the disease. Perhaps my original question, without the question I put to help you out, would be the best one. Have you any suggestion you can make as to the method of administration if the Board of Agriculture were to take over the control?—One of the Committee has spoken about compelling them to report to the police; I know for a fact that disease is on a place sometimes and that is not reported.

2227. How far do you think the local authority would assist the Board of Agriculture in the event of their taking over the control?—We have those 11 inspectors at present who are quite ample, I fancy, to do all that it is necessary to do. If we had power to enter a piggery and see that the thing is properly kept, I have not the least doubt that swine fever would go down to a minimum.

2228. And you think the existing machinery is quite capable of undertaking it?—Quite capable.

2229. In fact that swine fever should be put on all fours with pleuro-pneumonia as to treatment by the Board of Agriculture?—Just so.

2230. And that the supreme control should be in London?—Perfectly.

2231. And that the Board of Agriculture and their veterinary advisers should be the sole referees as to the diagnosing of the disease?—Of course, if the Government take the responsibility of paying the compensation they are entitled to be the referees in the matter.

2232. Now there is just one little point; I have some slight diffidence in alluding to it, but I think perhaps by putting a question it may do some good; you and I both know that there has been a considerable amount of feeling in Midlothian and Edinburgh with reference to the policy adopted by the Board of Agriculture, rightly or wrongly, and I thought possibly a question or two might tend to clear up and put things on a better footing. Is there any point that occurs to you in which the Board of Agriculture, without in any way delegating their authority could, as it were, conciliate public opinion in their dealing with swine fever. Of course you know quite well that I am referring at the present moment to pleuro-pneumonia; but I think perhaps your view on this might help us in this matter?—Do I understand that in asking the question you are assuming the powers to be delegated to the supreme Board here?

2233. I am assuming that the power is being taken over by the Board of Agriculture, and that they will be, as far as swine fever is concerned, exactly in the same relation to us as they are now with regard to pleuro-pneumonia. Knowing, as you and I do, that there has been a certain amount of feeling against the the Board of Agriculture, rightly or wrongly, I want to know, with your knowledge and experience, both of the administration and also with regard to the farmers and others in the county who are interested, whether you could suggest anything that might be done so as to adopt a more conciliatory attitude?—Of course if it is taken over by the Central Board here it would be taken totally out of the hands of the local authority, the same as pleuro-pneumonia, and we would have nothing to say on the matter at all.

2234. Perhaps you could tell us what has been any cause of complaint with regard to the slaughter of animals, for instance under the Pleuro-Pneumonia Act?—I am perfectly certain that you gentlemen know that there has been a considerable amount

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of friction between Midlothian and the Board in the matter.

2235. (*Mr. Carrington Smith.*) Does that friction exist now?—It would not be allayed if swine fever was dealt with on the same principle. If a diseased pig's entrails are to be sent to London the same way as the organs in pleuro-pneumonia had to be, the friction would not be allayed.

2236. It would arise again?—Yes.

2237. (*Mr. Wardlaw Ramsay.*) Then we may take it that that has been a source of discontent?—It has been publicly expressed.

2238. Do you consider that there were sufficient grounds for it?—I must qualify my answer so far; it was not only this, but it was also due to one or two orders that came down in conjunction with it, I am speaking of pleuro just now, although we have to speak about swine fever. One or two orders that came down along with the pleuro regulations appeared to us practical men to be of extreme stringency, and we thought no great good could come out of them. It was those orders, conjoined with this, almost totally taking the power from the local authority, that was the cause of the friction. I have no doubt of that. The local authority were virtually nowhere ultimately in the case.

2239. Forgive me for going into this question; is it the case that it was expressed by more than one gentleman, at a meeting that was held in Edinburgh on this subject, that there was no body of men more disposed to be loyal to the Board of Agriculture and to assist them in their efforts to suppress pleuro-pneumonia, but that they felt that the Board of Agriculture might, I think the expression that was used was, have "carried" the local authority along with them?—Distinctly so; that was so.

2240. Was that very distinctly expressed?—It was so distinctly expressed, this ignoring of the local authority, that two members of the local authority of which I was chairman left the meeting and never came back to our meetings.

2241. Really the feeling was that all that was wanted was that there should be just a little more——?—A little more give and take between the head office and the local authority. The local authority found themselves in a peculiar position. We thought that we had a far better local knowledge, and that local knowledge, I think, with all deference, ought to have been asked; at any rate it was not asked, it was simply ignored.

2242. Having brought that out I would like, please, if you would just tell us what is your opinion as to how large an infected area need be in the case of swine fever; would you close a whole county for swine fever?—Not a bit; I would leave that distinctly in the hands of the inspector, whoever he is.

2243. Or would you enclose a parish?—You cannot have a parish of pigs.

2244. What do you think would be a suitable area, or do you think each case would need to be dealt with separately?—Most distinctly.

2245. And of course that would be entirely in the hands——?—Of the inspectors as far as possible.

2246. And of the Board. As to restriction as to movement, would it be considered a great hardship in Midlothian if the whole county was scheduled for swine fever?—Certainly.

2247. It would be?—Most distinctly, and there would be no reason for it.

2248. Or even a large portion of the county?—There would be no reason for it; it is not like cattle, the movement is not the same at all.

2249. (*Sir W. Kaye.*) I suppose you would agree in this that nothing succeeds so well as success itself?—Perfectly.

2250. Have not the Board of Agriculture been perfectly successful in their dealing with pleuro-pneumonia?—Distinctly so.

2251. I suppose the friction which you talk of, which arose, was merely at the commencement of their action in the matter?—All through.

2252. All through?—Yes, I may state that a good deal of the friction was on account of the want of harmony and the want of the recognition of the Local Board. They simply did not take our views on the matter, or experience of stock and other things.

2253. At all events the action has been perfectly successful?—It could not otherwise be.

2254. And your local rates have been considerably saved by the payment of compensation out of Imperial funds?—Distinctly so.

2255. Do you not think that if the same course were taken as regards compensation in swine fever it would be very well received?—Distinctly, that is what I say, so far as the compensation is concerned.

2256. Did you say what maximum you would fix for compensation as a general thing to be given in the case of healthy animals, that is, animals in contact?—I would value them the same as you do the cattle—give them the market value.

2257. The original Act of Parliament limits the value, you cannot give beyond a certain sum, and I am sure the same principle would be acted upon in any future Act of Parliament?—Just so.

2258. Therefore, what sum would you say; a witness has said here, if the 4*l.* were raised to 7*l.*, it would be fair?—Quite sufficient.

2259. You said that as regards the action in different parts of the county of Midlothian it very much depended upon the action of the local inspectors?—If it had been left to themselves it would.

2260. I presume that the same instructions are given all round by the local authority?—Yes, they are, the slaughter is stopped all through.

2261. I think you said as regards the area to be declared you would not think of having so large an area as you would in the case of other animals?—No, I would not.

2262. The only point that seems rather hard is that you suggest the smallest holder of land with a single pig should be licensed?—I do not see how you are to prevent miners carrying the disease; they are one of the means by which the leakage will take place.

2263. Have you many miners in your local authority?—Thousands of them, they come to Edinburgh market, and buy those pigs which come out of the piggeries.

2264. Mr. Cunningham did not think that it would be at all necessary to require the small farmers of this district to be licensed?—But how are you to stop the pigs going out to the miners in the district.

2265. I am referring to the ordinary small farmers where they exist?—You have plenty of men with two pigs or three pigs, you have occupiers with three pigs, and they are just as careless as anyone else, and you have no power to go into a cottier's back garden except under the Public Health Act.

2266. (*Mr. Stephenson.*) You say you have no power to prevent the miners getting the pigs from Edinburgh?—No.

2267. Could you not schedule Edinburgh?—Then you would stop the market totally.

2268. Very well; do it. You have the power to schedule, have you not. You can schedule any place. That is, you can prohibit the movement of the pigs into Midlothian from any part of the kingdom?—We have never exercised such power.

2269. But you have such power—all local authorities have it?—Yes.

2270. That would be one way, would it not, of preventing diseased pigs coming into your district?—Yes, but then we do not know that they are diseased when they come to Edinburgh. There was this case I told you of where the man bought those pigs in Edinburgh market. They were three weeks home before the disease developed. You could not prevent

the man from buying those pigs. I think it came from this place outside the city.

2271. Will you tell me whether you keep any valuators to value these pigs before you kill them?—They are valued by the inspectors.

2272. By the veterinary inspectors?—Yes, but in one or two cases they were valued by salesmen.

2273. You have no regularly appointed valuator?—No.

2274. With reference to the eleven inspectors you have in Midlothian, are they all veterinary inspectors?—Yes.

2275. And they have power to value?—Yes.

2276. And to order the slaughter of the diseased pigs?—They have the power to do that.

2277. Have you any sub-committees formed of the executive committee?—No.

2278. Have you no local sub-committees?—No.

2279. Have you never used your power to form them?—No, it all comes through the one committee.

2280. You know you have power to form sub-committees in all the different districts of your county?—I am aware of it.

2281. And that these sub committees should investigate each outbreak and do what they thought best?—Just so.

2282. But you have never used your power?—No, I have done it myself. I visited all these swine fever infected places [illegible]f twice.

2283. [illegible]ve slaughtered so many diseased pi[illegible]umber of what you call in-[illegible]h never became diseased, [illegible]er really been in contact [illegible] what is your idea of [illegible]f course, means a pig [illegible]' in-contact" in the [illegible]g next door with [illegible] that almost an in-[illegible] pigs with a wooden parti-[illegible]igs.

[illegible]mained healthy?—Yes.

[illegible]ng do you keep those places shut up [illegible]ave killed the diseased pigs?—Thirty days. [illegible]ight days is the legal time, but thirty days [illegible]ime we adopt, sometimes longer.

2287. Who pays for the disinfection in these cases?—The owner has done so.

2288. You have never paid for that?—No, we have not.

2289. Do you think it is possible that every pig in the country and every piggery should be licensed?—I do not say pigs, I say piggeries.

2290. If a man has a sty and one pig in it, that is a piggery for that man?—Yes. I say that he ought to be allowed to keep that pig by permission, and we ought to have power to go and see if that piggery is in a proper condition.

2291. Would you make that part of the county council work, or of police work, or of the magistrates work?—The owners should be required to get a licence.

2292. Do you not think it would entail an immense amount of labour?—I have no doubt it would. I know that I am singular in my opinion upon the matter.

2293. Do you think it is feasible? Do you think it could be done with hundreds and thousands of small owners?—Yes, I do.

2294. I am referring to other parts of the country. I am not referring to Midlothian?—I beg your pardon. Of course, that is different. But I cannot see a way out of the difficulty of keeping the small two's and three's clean, which is the bugbear in the matter.

2295. It has been brought out from you that there has been a great amount of friction between the Board of Agriculture and the Midlothian authorities referring to the slaughter in pleuro-pneumonia?—Yes.

2296. You have admitted that the slaughter has been a great success?—Excuse me, I did not say slaughter, I said the general working of the Act.

2297. You admitted that it has been a greater success than anyone could have anticipated?—No doubt of that, it could not otherwise be.

2298. Do you know of any county in the kingdom where there has been any friction except Midlothian?—Perthshire.

2299. What has been done there?—I am not aware, but I know that the friction was very strong there also.

2300. In what way?—In regard to procedure.

2301. As to restriction?—Yes, as to restriction, and the working of the Act.

2302. What is your idea of restrictions in the disease of swine fever? What would you think to be a proper size of infected place, and a proper size of infected area, supposing you had an outbreak of swine fever to contend with?—That would depend very much on the locality. If it broke out at some of those places near Edinburgh, if you made a half mile radius it would take 400 or 500 pigs in at once.

2303. Why should you not do that if there were 400 or 500 pigs within a radius of half a mile, do you not think it would be proper to take them all in?—Just so, half a mile would be quite sufficient to do that.

2304. May I take it for granted that you know the disease of swine fever is spread differently from pleuro-pneumonia?—I understand that swine fever is carried by contact, principally by the droppings and the animals' water, and a good deal of it by bad drainage.

2305. And dogs, and birds, and rats, and cats?—I believe rats, but I would hardly think birds.

2306. And by the feet of men?—Distinctly.

2307. By manure and by markets?—By the feet especially—by the feet of some of the dealers.

2308. (*Mr. Joseph Smith.*) For how many years previous to 1892 had you killed healthy animals and paid for them?—I could not say that; I have only had active work since the county council began, but prior to 1887 the great majority of those pigs were under the city authorities.

2309. From 1887 to 1892 were the number of cases increased?—In 1891 we had nineteen cases only. The years are rather misleading as regards cases; you should take the months in the year. For instance, in three months, taking the end of one year and beginning of the following year we lost 882*l.*, which is as much as the whole twelve months in another year.

2310. You did not find that this slaughter stamped the disease out?—It recurred again; of course it has recurred over and over again, but that has been carried evidently by the bad drainage or something of that kind.

2311. I understand you stopped paying for those other pigs because of the cost?—Because of the cost, and because we are doing as much good without the slaughter.

2312. That is a matter of opinion?—Exactly so. I have a case here where the place was cleaned out, washed and cleaned, and a recurrence has taken place within three months of it in the same house. It was washed and cemented.

2313. (*Mr. Carrington Smith.*) How is it that Mr. Cunningham seems, judging from his evidence, to have generally ordered the slaughter of in-contact pigs?—You must understand that Mr. Cunningham was the veterinary inspector of the largest area in our county. He had the largest number of pigs in his division. Mr. Borthwick has 800 or so, but Mr. Cunningham will have from 1,800 to 2,000.

2314. Are you satisfied that the principle on which Mr. Cunningham has acted has been a successful

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principle as to stamping out the disease within Mr. Cunningham's district?—Distinctly, because he pulled down the sties and built new ones.

2315. At whose expense?—At the expense of the owners of the pigs. It was a most marvellous thing in some cases. Those men were told that we would keep them from re-stocking the place unless it was put in proper order, that is the simple fact of the matter.

2316. If I might be allowed to say so, you offered the additional bribe of paying the value of the in-contact pigs on condition that they did certain things?—No, we made no condition whatever.

2317. You did pay for the in-contact pigs if they did so-and-so?—At that time we took the whole of the pigs away and killed all the pigs in the place.

2318. But you paid for the in-contact pigs?—We valued the whole of them, they were all valued and we paid the loss, the local authority bore the loss.

2319. With respect to pigs?—With respect to pigs.

2320. With respect to the expense on the premises the occupier paid for that?—Yes. Of course, if he had not made his premises right, he would not have got his premises re-stocked.

2321. Do you not prosecute in the case of non-reported disease?—If we find it out, certainly.

2322. I gathered from you that you never did?—Since I made that statement I remember we have.

2323. Have you ever instituted any prosecution for non-reported disease?—I think there was one, either one or two.

2324. We are almost beating a dead horse, I believe, but do you not think the action of the Board in respect to the diagnosis of the disease of pleuro-pneumonia has been fully justified by the result?—Distinctly so.

2325. With respect to the diagnosis of that disease, you say distinctly so?—In diagnosing, you take the local inspectors and ask them to diagnose the disease, is that what you mean?

2326. I will put the question again. Do you think that the action of the Board with respect to the diagnosis of the disease in pleuro-pneumonia, has been fully justified by the result?—I cannot say that I understand the question.

2327. Are you not fully satisfied that the action of the Board has been justified by the fact that the existence or non-existence of the disease has been left to the decision of the central authority in London?—So far; I cannot dispute the fact but I consider the veterinaries in Edinburgh were quite competent.

2328. You grant that the action of the board with respect to the diagnosis of the existence or non-existence of the disease has been successful so far as to clear the country from pleuro-pneumonia?—It has.

2329. You also think that the same result might have been arrived at if the diagnosis of the disease had been left to the local authority?—To a central authority in Edinburgh.

2330. Then you would have backed Edinburgh against London?—No, not exactly so, but I say it is much handier to have the authority in Edinburgh than here, and it would have kept down the immense friction which there was at the beginning of the thing. There are no two ways about that.

2331. You did not ask for a central authority?—No, I would not ask for a central authority.

2332. Wait a moment for the end of my question—you did not ask for a central authority, but you think that that centre should have been at Edinburgh?—No, I do not say the central authority should be there. I say that if the board had had a representative at Edinburgh that is all that was required.

2333. With respect to Scotland would you have asked for any central authority at all, or would you have been satisfied with the local authority?—I would have had a representative of the central authority in Edinburgh.

2334. For Scotland?—For Scotland. I would not have been content with the local authorities inspectors' report *solus bolus*.

2335. With respect to the license do we correctly understand that you think that a license might very properly be required in case of any man who keeps a pig?—I do not see any other way out of the difficulty.

2336. That is to say you think that if a license be required at all there can be no discrimination as to where licenses should be given?—If it can be done otherwise I certainly should prefer it, but I do not see how you can get at a small owner's pigs. The difficulty is with the two pigs kept by these small men, and I do not see how you are to get over that.

2337. (*Sir Jacob Wilson.*) Are you aware that it is admitted by veterinary authorities all over the United Kingdom that swine fever is difficult to detect?—One kind of it I should say was.

2338. Are there two kinds of swine fever?—I am led to believe there are.

2339. Will you define the other one?—I am not a veterinary, but I know this, that there is a swine fever which is ocular, if I may so call it; you can see the rash, and you can see the affect[illegible] the back and the ears.

2340. You understand [illegible] be detected in the living a[illegible] kind of swine fever.

2341. May I ask [illegible] can be detected in [illegible] may be on do you [illegible]

2342. Yes?—[illegible] but I have quoted [illegible] man's possession for [illegible] had the disease before [illegible] three weeks before it was [illegible]

2343. Then to go back to th[illegible] agree with the veterinary authoriti[illegible] to detect?—Yes, the other kind.

2344. This is the first time we have [illegible] brought out in this Committee?—Indeed [illegible] astonished at that. It is known amongst pig de[illegible] Of course I have no personal experience. I am spe[illegible] ing from hearsay from pig dealers.

2345. In the face of professional opinion, not the professional opinion of the Board of Agriculture, but professional opinion all over the country, do you realise that it would be dangerous to submit the final decision to more than one central authority?—I do not understand exactly.

2346. The decision to require the lungs of animals slaughtered for pleuro-pneumonia to be sent to the central authority was the original cause of the friction in Scotland?—It started it.

2347. That was the original cause?—Yes, but the friction, you must understand, changed.

2348. The words "original cause" cover that?—Yes, they do.

2349. Now do I understand that in the minds of the veterinary authorities in Scotland that has now disappeared?—To a certain extent it has, I think. Of course I am not speaking as a veterinary.

2350. The other matters causing the friction were outside that question?—Yes.

2351. As responsible for the action of the local authority in Midlothian, are you aware of any probable introduction of diseased pigs from England or Ireland?—I am not.

2352. (*Professor Brown.*) Is it the case that you think it desirable that there should be a central authority in Scotland in regard to swine fever? Supposing that the Board of Agriculture takes charge of the extermination of that disease would you propose to have a central authority in Edinburgh as well a[illegible]

in London?—I would consider that the present machinery is quite sufficient to detect the disease and to report to you upon it without any further machinery.

2353. Do you mean the present machinery in regard to swine fever?—We have 11 inspectors and we are quite competent to report.

2354. Do you mean that observation to apply only to Scotland, or do you extend it to England and Wales?—I have no idea as to that. I have no knowledge as to the working of it out there.

2355. You are only speaking of Scotland?—Just so.

2356. Do you think every veterinary inspector in Scotland is competent to decide upon the existence of swine fever?—I will not go so far as that. I will not.

2357. Do you think it would be enough that the matter should be settled in regard only to Edinburgh particularly?—I am speaking only for ourselves in the County of Midlothian. I did not know that you were wanting my opinion on the general condition of the country.

2358. Does not that rather suggest that in your opinion when it is decided that the central authority in London shall be satisfied of the existence of the disease, Edinburgh should be omitted from any test, and that they shall decide for themselves?—I said if the Government take over the payment they are entitled to have the supervision of it. I said at the beginning if the Government are going to pay for it of course the allocation of those who are going to look after it is in their hands.

2359. I understand that what you said was that you would limit this exceptional arrangement to Midlothian, which need not apply to other parts of Scotland?—I mean to say this, that if the central board in London want to carry out the swine fever compensation business those eleven inspectors that we have are quite competent to furnish you with details as to the value.

2360. (*Mr. Carrington Smith.*) As to the value?—Yes.

2361. (*Professor Brown.*) I will repeat my question. I understand that what you said was that you would limit this exceptional arrangement to Midlothian, which need not apply to other parts of Scotland?—I would not limit it anywhere. I can only speak for Midlothian. I cannot speak for other countries.

2362. (*Chairman.*) You desire of course to speak only on those matters which are within your own knowledge?—Of course I cannot speak of things I am not commissioned to.

2363. (*Mr. Wardlaw Ramsay.*) Supposing the Board of Agriculture took over the control of swine fever in the same way that they did pleuro-pneumonia, the diseased organs would be sent to London?—Distinctly so. I said so.

2364. Do you consider that in place of that there should be a representative of the Board of Agriculture in Edinburgh, and that the diseased organs should be sent there instead of sending them here?—That is the public opinion. The general opinion on things of that kind is this, that if the board had a representative in Edinburgh it would become much more in touch with the local authorities and much easier got at than the London Board.

2365. For the whole of Scotland?—For the whole of Scotland, yes.

2366. (*Professor Brown.*) Now I understand that if you have a central arrangement of that kind in Edinburgh that would apply to the whole of Scotland?—Perfectly.

2367. I suppose you would think it out of your province, but speaking as a man of business and of general knowledge would you suggest that a similar arrangement should be made for Wales, where there is more swine fever than there is in Scotland?—No, I would not. I do not know anything about Wales.

2368. You are a man of business as I say, and a man of general knowledge. What would your opinion be if you have a central authority in London; mind, I am not objecting to it?—Quite so. I am only giving you my own private opinion.

2369. One central authority in England to deal with swine fever in England in regard to its morbid appearances, and one in Scotland dealing with all cases in Scotland, which would be much more convenient undoubtedly in matters of transit; would you on the same principle say that there should be a similar arrangement in Wales?—Distinctly so. Excuse me for one moment. When I speak of a central authority in Edinburgh I do not mean to say that that central authority in Edinburgh is apart from your London authority; it is part and parcel of it. I do not for one moment think of starting three different swine fever parliaments.

2370. All my questions have related to the question of deciding the existence of disease?—If the Board in London had sent a representative or had a representative in Scotland, let it be one of the London Board if they chose, there would not have been an iota of friction throughout the whole of this confounded uproar.

2371. (*Sir Jacob Wilson.*) Was it a question of standing on dignity?—No, it is not dignity.

2372. (*Chairman.*) What you mean is that it is more a question of distance than of dignity?—Excuse me, it is a question of locality.

2373. Exactly, that is what I mean. It is a question of locality?—We are cognizant of the wants of the locality, which those in London are not.

2374. (*Sir Jacob Wilson.*) Therefore the Welsh people should have the same arrangement?—Exactly; but still you would have the same executive in London.

2375. (*Mr. Stephenson.*) Still they got rid of pleuro-pneumonia?—When you hang a man for committing murder you do not hang all his family.

2376. (*Professor Brown.*) Your inspectors are not as a rule instructed to inquire as to the origin of outbreaks of swine fever, are they?—No, I am not aware that they are.

2377. There is one question I asked a witness this morning, which he could not answer quite satisfactorily. Supposing that an inspector does occupy a good deal of time in investigating an outbreak without instructions from the local authority, would the local authority pay him for so doing?—The local inspector has a pretty open hand. The inspectors get 5*s.* to 10*s.* for the visit, and the visits are as often as they choose. We do not check them.

2378. They are not bound to any particular line of action?—As regards visits, no.

2379. If they thought fit to make further inquiry and charged for so doing you would pay them?—I am not aware that we hunt up the source of disease now. I do not understand what you mean.

2380. My question was that if the inspector did it on his own responsibility without your instruction, if he hunted up the cases as you term it, would you pay him for so doing if he charged it in his Bill?—If he charged his visit we would.

2381. You would?—Yes.

2382. (*Chairman.*) Have you found any difficulty made by the recent Local Government Act in regard to the matters for which you may pay compensation on account of slaughter? I think perhaps I can elucidate the question a little. It was the practice in England in some counties before 1888, that is, before County Councils existed, to pay compensation not merely when a pig was slaughtered, but when a man had given fair notice and a pig died. That was done in order to encourage people to give notice. But since the Local Government Act of 1888 those payments have been disallowed by the Government auditor on the ground that the payment is only legal when the pig is actually slaughtered by order. Have you found the

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same difference in Scotland? Did you in any case pay compensation before when a pig died?—I cannot speak to what we did before the County Council existed.

2383. (*Sir Jacob Wilson.*) Do you consider that the same necessity exists for having the lungs and entrails sent for examination by the central authority in a case of swine fever as is the case in pleuro-pneumonia?—I am not competent to give an answer to that.

2384. I am speaking to you as deputy chairman of the Executive Committee. You have recommended that the lungs and entrails, or whatever is necessary to be sent, should be sent to a representative of the Board or other authority in Edinburgh instead of London—that is so, is it not?—I did not understand so. I did not know that you sent the lungs and the entrails of pigs.

2385. Then may I ask what it is you want the representative of the Board in Edinburgh to do?—To pronounce the case to be a case of swine fever.

2386. Do you know upon what evidence the central authority now pronounces on a question of pleuro-pneumonia?—Yes. If it is necessary that such things have to be sent, by all means send them.

2387. I will only ask you, as the representative of a local authority, whether you, knowing all about swine fever, think it is of the same importance and necessity to send the organs up as it is in other cases?—I do not think so.

2388. You do not think so?—I do not, because the pig is so distinctly marked you cannot mistake it in the one case, and in the other case it is seen when it is killed.

2389. Do you mean to say that it is distinctly marked in the living animal?—Yes.

2390. (*Mr. Carrington Smith.*) In case the Edinburgh authority decide upon the existence or non-existence of the disease, from what funds should you propose that compensation should be paid—from Scotch funds or from Imperial funds?—I am going on the understanding that it is from Imperial funds.

2391. Then I will put it in this way. If you had the choice that the diagnosis of swine fever should be vested in the Edinburgh authorities on payment out of Scotch funds, and on the other hand you had the choice that the diagnosis of swine fever should rest with the central authority in London, payment being out of Imperial funds, which would you prefer?—I cannot say. I do not see what difference there would be in it. Of course, payment out of the Imperial funds would mean less coming from Scotland, that is perfectly certain. It is a question of money.

2392. That is what I wanted to get at. Precisely under the conditions put down in the previous question, you would put in your pocket your choice for Edinburgh, and leave the choice with the Board in London?—I do not exactly understand that.

2393. If the onus of payment was taken off Scotland and put on to the United Kingdom, you would prefer that the examination should take place in London?—But I hold the central authority in Edinburgh should be part of your London authority.

2394. Then I think I may take your answer to be that in case the payment should come on the central authority with central inspection, you would prefer that it should be so rather than upon local funds?—I want it on the Imperial funds. I want it off the local rates, most distinctly.

2395. But you still ask for local diagnosis if you have the Imperial funds to pay for it?—I do not say local diagnosis. I would like a representative of the English Board or the head Board, that is my idea, to be in Scotland. Let the head man in Edinburgh be one of your own men, as the case may be.

[The Witness withdrew.

The Rev. Dixon Dixon-Brown, called in; and Examined.

The Rev. Dixon Dixon-Brown.

2396. (*Chairman.*) You are chairman of the Contagious Diseases Executive Committee in the county of Northumberland?—I am.

2397. You have held that office for some time?—I have. I had been chairman of the Committee for eight years previous to the County Council, and ever since the County Council was appointed, I have continued to be the chairman.

2398. Will you tell us briefly the regulations and practice with regard to swine fever which have held good in the county of Northumberland during the period for which you have been chairman?—The Executive Committee delegates to certain sub-committees—one for every Petty Sessional Division of the county of Northumberland—some of its powers. In the event of the appearance of disease, notice being given to the inspector, who is generally a policeman, he immediately summons the sub-committee. The case is gone into thoroughly by the Committee, and the slaughter is ordered of all animals that are diseased, and all animals that are in contact as well. The whole responsibility for the time rests upon that sub-committee, the Executive Committee generally not interfering at all, but confirming all that they do. The sub-committees call in a veterinary inspector, generally our chief veterinary inspector, or if he is not available, some other veterinary surgeon in the neighbourhood, and it is upon the advice of that officer that they act in ordering the slaughter of animals.

2399. Now what has been the result of the policy you have pursued; has it been successful?—Most successful in small outbreaks. It has been the ordering of the slaughter of all animals, and perfect isolation and cleansing. I think I may say in every case that has occurred, we have never had one instance of the spread of disease from any centre that we have treated in that way. We have had, in the course of the last three or four years, occasion to go farther, and to ask the Agricultural Department to declare an area in two instances, one in the year 1890, I think it was, and the other in the year 1891. The area that was declared was in one instance embracing fifty square miles, and in the other as much as sixty-five. In the first instance the effect was marvellous, and although the order came out only on the 20th May, by the 21st July the Executive Committee were able to ask the Board of Agriculture to remove the restrictions and declare that the movement of swine might go on as before. The same was the case in the year 1891. That began at a place near Morpeth, called Bebside; there were a great many cases, or several cases at any rate, occurred in the same district, and we deemed it advisable again to ask the Board of Agriculture to grant us an area which embraced, as I have said, as many as sixty-five square miles. The restrictions in that case seem to have lasted longer, though really no fresh cases occurred after the restrictions were once imposed, but on the 8th October following we were again able to ask the Board of Agriculture to remove the embargo and to declare that the swine fever infected area might be dissolved.

2400. Are those the only two serious outbreaks which you have had to deal with?—There is another one that occurred only the other day, which I put upon a separate report, arising from the asylum at Morpeth, which I have not included in my brief, but I thought it had better stand by itself. We had not to ask for an area in that case, but we traced by our own officers every case that apparently could have arisen, and as it proved afterwards did arise, from that outbreak at the asylum. There was no spread of disease in any one point from that one centre, although there was a good deal involved at the time.

2401. To what was that outbreak traced?—It

was discovered in the asylum. In the first instance we found it in the premises of a gentleman who lives at a place called Roseworth, near Gosforth. He had bought some animals from the asylum, and it was those animals evidently that had brought the disease into the place. How it had got to the asylum I do not think any one knows, but I am afraid it had been there a longer time than we had thought could have been possible. There is no doubt about it that a good many of the pigs had been ailing for weeks previously. The farm bailiff of the asylum said that he did not know anything of the disease, and he does not seem to have taken any particular pains to get the opinion of a veterinary surgeon to tell him what the disease was, until this affair at Roseworth took place, and then, curiously, as the officers were going from Roseworth to the asylum, another officer was coming from the asylum to the police to give notice. Until that moment there does not seem to have been any suspicion that swine fever was there, but how it came to the asylum I do not think ever has been known.

2402. There was no reason to believe that the pigs had been fed in any particular way, or with any particular food which aggravated the complaint ?—I never heard that.

2403. In your policy, successful as it has been, have you ever found any difficulty arising from the different practice of your neighbours or want of uniformity ?—Yes, we have, because our adjoining county of Durham has not the same restrictions that we have, and certainly there is no very great pains taken, I think, in the county of Durham to ascertain where disease is, and consequently in several instances swine have been brought from Durham into Northumberland, and have had disease upon them.

2404. Have you ever closed your county against Durham ?—As against others. We have a schedule that we correct probably every three months or six months, as the case may be, on to which we put all those counties in which there is swine fever existing, and until they are free we do not allow any swine to come from those counties except under the special Order to which I should like to allude, and copies of which I have brought with me. We have a special application for a movement licence, which anyone can get of the clerk of the County Council in the event of his wishing to bring swine from any of these counties which are scheduled. The form of application contains a number of questions which the applicant must fill up and send to me. I look through it, and if I find it contains no particular reason why it should not be passed, and if the man says, as he is bound to say, that there is no actual disease in or near the place from which the pig is to come, I send this to the deputy clerk of the Council, and he issues the licence, which is appended to it. We found this very useful, and, although there is no doubt when our restrictions are put on, there is a certain amount of inconvenience. I think it is reduced to a minimum by this special removal licence. I should like to put this in to show what we do (*handing in form*).

2405. Have you ever found any special trouble arise from the number of pigs which are found collected together in places, especially pit villages ?—There is a difficulty likely to arise from that, and has more than once. For instance, I think in the last outbreak that arose from the asylum there were one or two pigs that had to be slaughtered, and, as is pretty well known in all pit villages, every pitman has his little bit of garden and his pigsty and his pig in it, and so it is almost of necessity that a good many pigs should be in contact at the time. I have already said that during the last outbreak a great many of those that were put down were actually in contact, and a good many of the owners of the other pigs slaughtered their pigs, so to speak, to save their lives, before there was any infection at all. I think it might be a very serious matter if we had an extensive invasion of the disease in any of these pit villages, because they are so close together that numbers would be in contact immediately.

2406. Have you considered whether it would be possible to arm the county authority with some more drastic powers than are now possessed in regard to the sanitary inspection of these places ?—Do you mean with respect to the premises where pigs are kept ?

2407. Precisely ?—I think it would be very desirable, the same as we do with cow-byres and such places. And we had in one instance, that instance of the Morpeth Asylum, to condemn certain buildings which were used for the accommodation of swine, and in more than one instance where swine fever has appeared. We found the pig-sties and places where they were in a very filthy state ; we have forbidden pigs to be kept there until they were properly constructed even, and I think I may point to some places in the county where, even to this day, that construction has never been carried out, and consequently they cannot get any pigs there.

2408. How do you carry out that power ; under what Act can you, as a county authority, order that now ?—I could not tell you under what Act, but I know we do it, and by the advice of our veterinary inspector.

2409. Have you a county medical officer of health in your county ?—No, not for the whole county. We have officers for the different districts.

2410. You are aware that some counties have availed themselves of the powers of the Local Government Act, and appointed officers for the whole county ?—Yes ; some have, and others have not. It was thought that it would be interfering with the work of the district officers.

2411. Do you think that a county officer might be armed with powers of control in these matters. I will put it in this way : that, if a local authority was not doing its duty, the county officer should be able to come in over its head and order it to do so, or carry out the work himself ?—Yes, I think it might be desirable. Do you mean as far as cattle disease or swine fever is concerned, or generally ?

2412. I have asked the question generally. I suppose I should hardly be in order if I was to go beyond swine fever, but naturally it suggests other considerations ?—As respects swine fever I am quite content with the powers that we have with our own veterinary inspector, and I do not know that we should gain very much by having a regular county officer to overlook.

2413. Does it not strike you that whoever is your county officer, who is evidently a very energetic man, he has perhaps been exercising some powers which on a strict question might not be found to exist in an Act of Parliament, and therefore legislation might be necessary to support him ?—I say it is very desirable if it is so, that we should have our powers defined by Act of Parliament, certainly.

2414. Have you anything which you desire to say to the Committee with regard to the amount which can now legally be paid in compensation when slaughter is ordered ?—Yes, I think that the maximum sum which we are allowed to give in the case of the slaughter of an animal—only 4*l.*—is too small. For instance, we might order the slaughter of a sow, and if that animal is not diseased and the carcase is sent to market, we actually make more money by the sale of that animal than we are allowed to pay to an owner. I know an instance where we sold a pig for 7*l.*, and we were only allowed to pay the owner 4*l.*, which certainly was a very hard case.

2415. Are there any independent urban authorities within the limits of your county ; boroughs, I mean ?—Of course Newcastle is a separate authority altogether, but they work with us most harmoniously. The only other two are Morpeth and Berwick, and they have virtually thrown their whole responsibility upon ourselves ; we act for them, in fact.

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2416. That is under contract?—Under an agreement with them.

2417. It was the case, was it not, in your county, as I believe in some others in the quarter sessions days, that you paid compensation for pigs which died and were not actually slaughtered?—Yes.

2418. But that since county accounts have had to be audited by the Government auditor that payment has been disallowed?—Yes, it is so.

2419. Would you desire to see that power practically restored?—We should like it very much, for this reason: A poor man's pig very likely dies, and he has not had time to give notice to the local authority that his pig was ill, it has died so quickly, but he has given notice, and we used formerly to reward him for that readiness that he showed in giving notice by giving him the compensation to which he would have been entitled, supposing we had slaughtered the pig. As you remarked, under the old quarter sessions system that used to be allowed, but now that our accounts are subject to an auditor's very close inspection, of course he is bound to see that every payment that is made is made strictly in accordance with law; and according to the law we are not allowed to give compensation for an animal that has died. We should like to have that made a power that we could make use of.

2420. Now you have told us that the multiplicity of authorities is a source of difficulty in the administration of these Acts: what would your remedy be for that? Are you in favour of a central authority such as the Board of Agriculture taking over the question of compensation and slaughter?—Yes, we should like that certainly. What we want to get at is uniformity, and we do not see how that can be got unless we have it under one central authority.

2421. Supposing the Board of Agriculture dealt with compensation, and slaughter, and movement, would you leave the appointment of the inspectors with the local authority?—I should let them have their own inspectors if they took the responsibility upon themselves, certainly.

2422. And simply allow the Board of Agriculture to appoint an additional inspector when necessary?—Just so.

2423. When they desired to do so?—Yes.

2424. (*Professor Brown.*) I suppose you admit the importance of the principle of compensation?—Certainly.

2425. Do you think it ought to be on a liberal scale?—I do. I should put it upon such a scale as would encourage every owner of swine to report that he has disease upon his premises if he has it.

2426. Do you think that compensation should be looked upon as an encouragement to the owner to report?—I do up to a certain extent.

2427. Has it ever come under your notice that the compensation altogether has been characterized as a species of bribery?—I have heard it said so.

2428. Do you think there is any particular objection to the term?—I do not like it called bribery.

2429. But whatever you call it you think it absolutely essential that the owner when called upon to give notice, the result of which will be a very considerable amount of inconvenience and probably loss to himself?—Yes.

2430. Should be compensated?—Certainly.

2431. On a liberal scale?—I do think so; not too liberal, but to the value of his property that he has lost.

2432. That there should be no niggardliness in awarding the amount?—No.

2433. Do you think that if that principle were altogether abandoned, notice would be given except under very strong compulsion?—I very much question whether notice would be given unless we had some means of compelling it, punishing for not doing so, which we have of course under the Acts.

2434. But in spite of that power to punish for not giving notice, is it not the case that the notices fall off very considerably whenever compensation is withheld?—I could not answer that, because we never have withheld it.

2435. You do not know any district in which the experiment has been tried repeatedly?—No, not in our county.

2436. You say that you were in the habit formerly of giving compensation for animals which died?—Yes.

2437. And that you would like that power to be given to you?—I should like a discretionary power to be left in the hands of the authority, to do that if they were convinced that honest statements had been made, and that really the thing had been done fairly.

2438. Otherwise it would probably be open to a great deal of abuse?—I think it might.

2439. So that I gather that you would recommend, presuming it to be within the limits of practicable legislation, that in any amending Act relating to swine fever power should be taken by the Board to authorise the payment of compensation for animals which had died, if they were satisfied that the circumstances rendered it just, that the compensation should be paid?—Certainly, that is exactly what I should like to see.

2440. You mentioned, I think, just now that you sometimes received more salvage than the amount of compensation?—Yes.

2441. And regretted that you were not empowered to pay that extra sum to the owner of the pig?—Yes.

2442. Are you aware that by Section 30 of the Act of 1878, there is this provision, "If in any case the sum "received by the Privy Council or a Local Authority "selling a carcase of an animal slaughtered by their "order, exceeds the amount paid for compensation to "the owner of the animal slaughtered, the Privy "Council or Local Authority, as the case may be, must "pay that excess to the owner after deduction of reasonable expenses"?—I was not aware of that.

2443. So that you not only had the power, but you were under the obligation?—I was not aware of that.

2444. You would fix the maximum sum for compensation in regard to pigs, at something higher than the present amount?—Yes, I should let it be the value of the pig. We have valuers in the county, one for the north and one for the south.

2445. In the Act, of course, you must fix a maximum?—Exactly; I suppose that must be the case.

2446. Would you take that maximum up as high as 10*l.*?—No, I do not think so. I say, I think you are getting then into fancy prices.

2447. We are assured, at least, I have been, by the pig owners in Lincolnshire, that many a cottager has a fat pig that is worth 10*l.* to the butcher?—It may be so. I never sold one. I have sold a good many fat pigs, but I never sold one at that price.

2448. There is no very serious objection to putting a maximum rather above the value of an animal?—No.

2449. You are not bound to compensate up to it?—No, you are not bound to go up to the maximum.

2450. (*Sir Jacob Wilson.*) Am I correct in assuming that much of your difficulty in administering the law, with regard to swine fever, has been in the colliery districts of Northumberland?—Yes, it is so. I think in both the cases there were large villages involved.

2451. In accordance with the Act, two areas were fixed by the Central Authority, I presume?—By the London Authority. We recommended what the area should be, and it was confirmed by the Central Authority.

2452. That was in accordance with your recommendation?—Just so.

2453. And those were unusually large?—Unusually large.

2454. Now, did you attach very great value to the size of that area?—I did.

2455. In order that it should embrace the whole of the danger of that given district?—Yes, and we had such excellent boundaries in each case.

2456. Therefore the local circumstances of the boundaries influenced you, in your opinion?—Yes, they did so.

2457. I presume that no animal can go into or could go out of that area?—The words are, there can be no movement "in, into, or out of."

2458. I was going to ask whether you prevented the movement within the boundary?—Yes, I think we did.

2459. Therefore, from that I gather that you attach considerable importance to restriction of movement?—Yes.

2460. Have you generally been able to trace the origin of the outbreaks in Northumberland?—I think we have, generally. There are some cases that puzzled us, but I think we generally have.

2461. Has that origin frequently been outside the boundary of the county?—It has sometimes.

2462. Are you aware whether that origin has ever been traced to Ireland?—I do not recollect a case.

2463. Was I correct in gathering that you were unable to trace the origin of the recent outbreak at Morpeth Asylum?—I believe we are quite unable to trace how it got there.

2464. Have you ever heard of pigs being imported from the county or borough of Bedford into Northumberland?—The county of Bedford I have signed applications for. I do not think I have ever for the town of Bedford. I do not remember.

2465. Have you ever been able to trace any disease to that district?—No, never. I never knew any disease arising through any swine imported from the county of Bedford; never heard of it.

2466. The city of Newcastle has, I believe, a very large cattle market?—Very large.

2467. In which pigs are sold weekly?—Yes, I believe so.

2468. Although that be the case you have not been able as a rule to trace any great amount of disease coming into the county from that market?—No, I do not think so.

2469. And that is due to the uniform measures adopted by the county and the city?—It is so. We always act in perfect uniformity.

2470. Do you consider that pig dealers are a frequent source of dissemination of disease?—I have a very strong suspicion of pig dealers.

2471. Have you been able to trace any outbreaks directly to pig dealers?—Yes, we have; not lately, but we have in former times.

2472. Would you think it sufficiently important to recommend that they should be licensed?—I never thought of that.

2473. In the event of a serious outbreak of swine fever in your county, have you any suggestion to offer for the institution of any form of restrictions other than those which at present exist?—I think our system is as perfect as it can be. I think we have a most admirable force of inspectors, who are mostly policemen. We have an excellent veterinary inspector who has had great experience in the disease itself, and I think the way it has worked cannot be improved upon.

2474. I gathered that you know of no instance in which disease has spread after once being discovered?—Not one single instance.

2475. Do you consider that compulsory slaughter alone is of very great value?—It is of some value.

2476. Would you regard it then as quite perfect, if compulsory slaughter was to be accompanied by compensation and judicious restriction in movement?—Certainly.

2477. Do you think that those precautions accompanied by proper sanitary regulations would probably go far towards exterminating the disease?—I am sure they would.

2478. You have had considerable experience in the administration of the Cattle Diseases Acts, and have assisted very largely in exterminating foot-and-mouth and pleuro-pneumonia as well as cattle plague from this country?—Yes.

2479. Do you think that there is any greater difficulty before us in undertaking to exterminate swine fever?—I do not think there is. I think it may be done just as readily as foot-and-mouth and the other.

2480. (*Mr. Shaw.*) I am informed that a considerable number of Irish pigs come in to Northumberland?—I believe a good many do, but they do not come under my knowledge. I think they mostly go to Newcastle.

2481. And Newcastle is not in your jurisdiction?—No, it is not in my authority. It is a separate authority under the city; in fact it is a county of itself.

2482. Then, of course, you have had no experience whether these Irish pigs are infected with swine fever or not?—I could not say.

2483. You never have traced swine fever to the county; that is your experience?—That is my experience.

2484. As regards the maximum of compensation would you give your opinion as to what the amount ought to be?—I should have thought 7*l.* or 8*l.*, or perhaps as high as to 10*l.*, would cover every claim that I think possibly could be made, without actually binding the authority to pay that sum.

2485. In the case of a brood sow, would that mean a brood sow with a litter at foot, or brood sow in pig?—Yes.

2486. You would go as far as to 10*l.*?—I would not go further, I think.

2487. But you would go as far as that?—Yes, I would; I would make that the outside sum.

2488. I think you said that the Morpeth Asylum does not purchase pigs, but breeds all its own?—They breed all their own pigs; but I do not know whether they buy; I cannot tell; they certainly do breed very largely.

2489. (*Mr. Carrington Smith.*) Has your authority ever prosecuted owners of pigs for not giving notice?—Yes, we have.

2490. But not often?—Not often, because we really, I am thankful to say, have not reason to do so.

2491. But you have prosecuted?—We have prosecuted.

2492. During the same time you gave compensation, or was it previous to the time you gave compensation?—No, I think the compensation was going on. We withheld compensation in the cases where we prosecuted.

2493. Can you call to mind many cases in which death from disease has been so sudden as to give no opportunity to the owner to give notice?—There have been some instances, certainly.

2494. Do you attach great importance to the fact that all your boroughs work harmoniously with your county?—They are actually under our own authority—they have surrendered their powers over to us, and as in the case of Morpeth the Morpeth police are the county police; it makes it very much easier for us to work it.

2495. May we take it that the whole of the county of Northumberland, including the whole of the boroughs within that county, all work in precisely the same way?—Yes; Newcastle being a separate authority of course works by itself but at the same time in perfect harmony.

2496. Practically with you?—Practically with us, yes.

2497. You said, and I thought there was an emphasis upon the word that you had had no pigs imported into your county from the county of Bedford that had given you the disease?—Yes.

2498. And I thought you implied that it had come to you from the borough of Bedford?—We refused to

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take them from the borough, because we thought it was so very full of disease that we did not like to take them.

2499. Does that apply to any other boroughs in the county of Bedford except the borough of Bedford ?—I should not think so. I do not know what the boroughs of Bedfordshire are.

2500. But the fact remains that you interdict pigs coming to you from the borough of Bedford ?—Yes.

2501. (*Mr. Joseph Smith.*) As I understand you interdict pigs coming from anywhere where there is swine fever ?—We do except under special circumstances.

2502. For breeding purposes ?—Yes.

2503. Then you import pigs from very few counties ?—Very few.

2504. Can you tell us about what you have paid for compensation for a year or two ?—I can tell you exactly.

2505. Give it for the last two years ?—We have paid in the last two years, in 1891, 99*l.* 19*s.* 0*d.*; and in 1892, 40*l.* 15*s.* 0*d.*

2506. So you have nearly cured it then ?—We had a very serious compensation to pay in 1890.

2507. (*Mr. Carrington Smith.*) What was it in 1890 ?—253*l.* 8*s.* 0*d.* That was the largest compensation we ever paid.

2508. (*Mr. Joseph Smith.*) Does that include the inspection ?—No.

2509. That is compensation alone ?—That is just the compensation alone.

2510. Can you tell us what the cost of inspectors and police is ?—No, I could not tell you right off. It is all upon a scale, but I have not got the scale here.

2511. The police are paid what ?—For their travelling expenses and anything that they incur extra, and the veterinary inspector is paid a salary and has also certain allowances per day and so on for his work.

2512. Have you a veterinary inspector in every Petty Sessional Division ?—No, we have one veterinary inspector for the whole county, and in the event of his not being able to attend we send to somebody else.

2513. And any of these committees to which you refer call him in ?—They generally call him in, or they call in some other person they can depend upon.

2514. (*Mr. Stephenson.*) In the case of sudden deaths that you used to pay for, it is a fact that a man may give notice of his pig being ill one day, it is the following day before the veterinary inspector would get to know, and it may be some hours after that before he gets to the place 50 or 60 miles away ?—Yes.

2515. It was to cover this time partly that compensation was paid to him ?—Yes.

2516. He gave notice *bonâ fide*; but before the veterinary inspector could get there the animal was dead ?—Yes.

2517. But you considered that he was entitled to compensation ?—Just so.

2518. Have you had any trouble with small owners pressing for money since the formation of the County Council ?—Yes.

2519. Pressing for their compensation ?—Yes, we have had.

2520. Have you any special fund now by which owners can be quickly compensated ?—Yes, we have

2521. Without waiting three months for the County Council accounts ?—There is a special account opened now at the bank which the clerk of the council may draw upon, so that these poor people may get the compensation paid at once without waiting for the regular audit.

2522. But for that it would really be very hard upon these people ?—Very hard upon them.

2523. Because you have taken their pigs ?—Yes.

2524. You have salvaged them ?—Yes.

2525. You have got the salvage of the pigs, and yet, unless you had that special fund, you could not pay the owner the value of his pigs ?—No, probably not for two or three months.

2526. Are you aware that there are more suspected outbreaks in the county of Northumberland than there are real outbreaks ?—I can quite believe it.

2527. In your tabular form you have down here 60 outbreaks in 11 years ?—Yes.

2528. As a matter of fact there have been 68 suspected outbreaks that were not cases of swine fever at all ?—Yes.

2529. There have been slaughtered 233 in-contact animals in the eleven years from 1882 to 1892 ?—Yes.

2530. Do those 233 in-contact animals represent all the animals slaughtered in the outbreaks of swine fever in addition to those diseased ?—I fancy so.

2531. That is, you paid for 233 ?—Yes.

2532. But is it not a fact that perhaps 233 more or even more than that have been slaughtered by owners without compensation, and have never been brought into the returns ?—It is quite possible.

2533. It is a fact ?—Yes.

2534. There was something said about certain piggeries that had not yet been declared free in Northumberland; there is one at Hexham; the disease occurred in 1886 I believe, and one at Long Benton, in which the disease occurred in 1889 ?—Yes.

2535. Neither of those places have yet been declared free ?—That is so.

2536. And no pigs can get into them. Will you kindly explain how that is done in the county ?—We have a form here which is produced called a "Report "to a Local Authority of Cessation of Disease." This is a form that is sent by the police inspector, the police officer, in the first instance. He takes it to the members of the sub-committee, not necessarily magistrates, who if they are satisfied that the disease is at end will sign it. But that document is of no use until our veterinary inspector has looked into the thing thoroughly, more thoroughly than any of these others can do, and has signed it himself, and until he has done so this "Report of Cessation of Disease" is of no avail.

2537. (*Mr. Wardlaw Ramsay.*) I have just one question; it is about the harmony between the boroughs and the county. Many counties would like to have it. Supposing that the Board of Agriculture did not consider it right to assume the control of swine fever would you think it desirable that by legislation the different jurisdictions of county and boroughs should be abolished in order to assist ?—It would very materially assist if they could be abolished, if they could be placed all under one authority.

2538. The desirability if possible of abolishing the separate jurisdictions has been very much emphasised by one witness ?—I think it would be admirable. You would get rid of all jealousies and many other things that stand in the way of efficient control.

2539. (*Chairman.*) I suppose if the Board of Agriculture did not take over the powers, as has been suggested here, you would consider it a very great improvement if many if these minor jurisdictions were merged in the larger ones ?—I am sure of it.

2540. Have you any acquaintance with parts of England where the jurisdictions are very numerous and small ?—Our adjoining county of Durham is a case in point. There are so many towns that have their separate jurisdiction, and they all seem to me to be making different arrangements. In former times, when we had foot-and-mouth it was the most difficult thing possible to know what they were each doing. There is Stockton and Durham and many others all acting upon different orders. The only way to deal with them was to schedule the whole, boroughs and all.

[The Witness withdrew.

FIFTH DAY.

Friday, 10th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. ALEXANDER SHAW.
Mr. JOSEPH SMITH, jun.
Mr. T. CARRINGTON SMITH.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary.*

PROFESSOR THOMAS CARROLL, called; and Examined.

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2541. (*Chairman.*) You are, I think, Superintendent of the Agricultural Department of the Commissioners of National Education in Ireland, Inspector of National Agricultural Schools, and Principal of the Albert Model Dairy Farm, Glasnevin, are you not?—Yes.

2542. In those capacities you are intimately brought in contact with all agricultural problems, including those connected with the diseases of animals?—Yes.

2543. You are aware that the object of this inquiry is as to the best method of dealing with swine fever? Yes.

2544. Will you tell us briefly your experience in regard to swine fever in Ireland, historically. I mean when the disease, so far as you know, was first known in Ireland under that name, and so on?—I remember that in 1844 there was a considerable outbreak of it in the country, and since that I have heard that it existed in Ireland long before that. I myself saw cases of it in 1844.

2545. Now what is your view of the origin and character of the disease?—Of the origin I cannot speak; but do you mean the symptoms of the animal?

2546. I would say both the origin and symptoms, if you can tell us anything that throws light upon what you think is the origin of the disease?—From my reading and experience I believe it to be a blood disease, evidently contagious. The symptoms are, as far as are brought out, these: the animal appears very dull at first, appears to suffer interior pain; very soon red marks appear about the neck and jaw; following that will be discharge of bloody mucous from the nostrils, and considerable discharge from the eyes; the animal then lies, generally on the belly, and seems completely prostrate. Some may recover; I have known them to recover, but they never are worth much after once having had the disease.

2547. What is your view of the effect of dirt and filth on the disease?—I should not say that mere dirt and filth will cause the disease, but the disease having once appeared I believe that dirt and filth will keep it on the premises for some considerable time.

2548. Your opinion might be summed up thus: that although it does not generate the disease it keeps it up?—Quite so.

2549. And therefore cleanliness is a matter of very great importance?—Quite so.

2550. I think you had a rather remarkable experience in 1886, had you not, in connection with this matter?—Yes.

2551. Will you kindly tell the Committee what happened then?—At that time it was necessary for us to purchase some pigs, and I sent the steward into Smithfield Market; he bought a number of pigs, and in the course of about six or seven days some of those pigs appeared to be suffering from the disease. Two or three of them died rather suddenly. The disease seemed to develop rapidly, and subsequently our own pigs, pigs bred upon the place many of them, became affected. After waiting some short time I had the whole of the pigs on the place killed; at least those that were in one part of the farm were killed, and the place disinfected. We have had no outbreak of disease since.

2552. I think also you have had experience of a remarkable outbreak in the county of Wexford?—Yes.

2553. Will you tell us something about that also?—Curiously, I saw the farmer this week on whose farm this occurred. There was no sign of the disease in the neighbourhood. This man had about 70 pigs on his farm; the disease appeared and many of the pigs died. There was no idea of how the disease was communicated to them until it was found that a pig had been carried down the river, deposited on the bank of the farm, and that the pigs went there and tore the remains of this pig and possibly ate some of it. That was I believe unmistakeably the cause of the disease among the herd of pigs. I may say here that a favourite way of getting rid of diseased animals, if a farmer is fortunate enough to have a river running through his farm, is to throw the dead animal into it. That is rather a general way of dealing with it.

2554. Does the disease exist more in some parts of Ireland than in others?—I think so.

2555. In what part of Ireland?—I believe that in the West of Ireland, Connaught, the disease is more general than in any other part of Ireland. There are spasmodic outbreaks in other parts; but I think the disease is pretty well established there.

2556. To what do you attribute that?—First, the large number of pigs, and in that part of the country the old system of farmers living in villages with numbers of small houses aggregated together, the contact amongst the pigs being, of course, greater

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under these circumstances. I believe that is one of the reasons why it is kept in that district so much.

2557. And the peasants there are very much given to hiding the disease?—Yes, there is a very great indisposition to make known the disease. I have known several cases of the thing being kept quiet.

2558. That brings me to the subject of compensation. What policy has generally been pursued in Ireland by county authorities in regard to this matter?—As far as I can make out there are really very few cases dealt with under the Contagious Diseases (Animals) Act; then the ordinary course of law is taken, but I have heard of very few cases of compensation. Judging from the returns it appears to me that the number of cases that are dealt with is very few indeed.

2559. Does each county have a Contagious Diseases Committee?—Yes; the Boards of Guardians are the local authorities.

2560. Does not the county authority, the Grand Jury I suppose it still is in Ireland, have any authority?—No; I do not know of any case where the Grand Jury deals with such a question.

2561. They have no authority at all, I understand?—No.

2562. There is a material difference in the law between England and Ireland?—Yes; I know there is a considerable difference in the way in which the matter is dealt with.

2563. Perhaps you would just describe to the Committee who the swine fever authority is in Ireland?—That would be a Department of the Board of Guardians. The owner of the pigs is supposed to inform the Constabulary of the presence of the disease; the Constabulary then would report to the local authority, and I suppose the Veterinary Department of the Privy Council would be communicated with, and the matter would be dealt with by the Board of Guardians.

2564. The Board of Guardians, in fact, is the local authority?—Yes.

2565. What do they generally do: Do they appoint a committee or do they act as a body of themselves?—They act as a body of themselves; they appoint an inspector; in some cases that inspector is the valuer, and in other cases they appoint an independent valuer to assess the value of the animal killed.

2566. Now what policy has been pursued by these guardians, acting as the local authority, as a rule, in regard to slaughter and compensation?—As far as I can judge it has been a policy almost of inaction.

2567. Have they, in any cases, acted in regard to the movement of swine?—There is very little of that, as far as I can make out; there is very little action with regard to the movement.

2568. Do the Irish Poor Law Unions vary in size a great deal?—Yes.

2569. How does that affect the question of dealing with diseases of animals; should you say that the Poor Law Unions, as a rule, were too large or too small for the purpose?—I should say they are too large, and the difficulty of getting united action is very great also. The Act appears to be, to a great extent, permissive, and it appears to me that the difficulties of united action are very great.

2570. I believe that in Ireland there are no very small unions like we have in England?—No.

2571. I dare say you are aware that in England there are many Unions with a population of only 8,000, and one or two with a population of only 2,000, although, of course, they are exceptional?—Yes.

2572. As a rule, the Irish Union is a large area, both in population and size?—Quite so.

2573. Therefore, on the whole, I should not unfairly sum up your evidence on this point if I were to say that the Board of Guardians have done very little in order to stamp out this disease?—Yes.

2574. Now, in order to cope with it, what are the recommendations that you would desire to put before this Committee?—Taking into account the very beneficial results that have come from the action of the Veterinary Department of the Privy Council in regard to pleuro-pneumonia, and also taking into account the difficulty that there is in getting evidence as to the prevalence of disease in the country, I should say that the carrying out of the Orders might, with very great service, be given to the Veterinary Department of the Privy Council. I should also say that smaller areas might be constituted, and that in Ireland this might be very easily done in consequence of our having what are called there townlands, which you have not in this country. There the areas might be very well defined, and the Orders could be very easily dealt with because of that.

2575. The townland is the sub-division of a barony, is it not?—Yes.

2576. It holds, on the whole, does it not, about the same relation which a large parish in England does to a union?—No; the townland, I believe, is smaller than your English parishes.

2577. I said a large parish, advisedly; of course, some of our English parishes are small, and some of them large?—Yes.

2578. Under the plan that you propose, would you give the local authority the power of appointing the inspector, or would you put that under the Privy Council in Dublin?—For the purpose of stamping out I should certainly put that in the hands of the Privy Council in Dublin. I think that the delays and the inter-workings which would result from allowing the local authorities to retain it would be so great that the thing would be practically almost ineffective.

2579. Now, assuming an outbreak to take place, would the first step, according to your plan, be as now, that it would be the duty of the owner of the diseased animal, or suspected animal, to give notice to a constable?—Yes, quite so.

2580. Would the next stage be that the constable should call in a local inspector or give notice to the Department in Dublin?—I should say to the local inspectors stationed in districts, I should give them districts, which would be the most workable way of dealing with the disease.

2581. And those inspectors would be representatives of the Privy Council, and not of the local authority?—Yes.

2582. The next stage would be for those local inspectors to hold an inquiry?—Yes.

2583. And the stage after that would be for them to at once inform the Department in Dublin?—Quite so. And an order would then be given to have the animals destroyed if found diseased, and all in contact with them.

2584. In order to ascertain whether the disease was swine fever or not, what steps would you take?—I should say that the disease is now so well understood that there would be no doubt whatever that the local resident inspector would know that it was swine fever; in fact, I do not suppose that the most ignorant of the farmers would doubt the opinion of the local inspector.

2585. You do not think it would be necessary to send up a portion of the diseased pig for a scientific expert in Dublin to examine?—Not necessarily. I think it possibly might be advisable to do so, but the disease is so well known and so well marked that I think that would be scarcely necessary.

2586. Supposing, in any instance, a portion of the diseased animal had to be sent to Dublin, would you say that there might be any risk of disseminating the disease by so sending the entrails?—Not in the least with a careful man, as those inspectors are supposed to be. They would have the parts packed so that there would not be the slightest risk from contagion.

2587. Do you think that if a more adequate system of compensation was introduced, the unwillingness of the peasants, especially in Connaught, to give notice of the outbreak of disease would be diminished?—I

should say that with a proper compensation the disinclination would be diminished, but I also think that a proper system of inspection should go along with this. I should not like to rely altogether on the good faith of the people to make it known that disease had appeared. I should say that a good system of inspection should go along with it.

2588. Still you think that a great deal of their indifference would disappear if they knew that on proving the existence of the disease, and that they had not themselves been the cause of it, they would receive adequate compensation?—I think it would improve matters, and the Constabulary could have a good deal of responsibility thrown upon them in the matter.

2589. I want to ask you a few questions about the sanitary aspect of this subject. Would it be desirable to do anything in the direction of licensing premises where pigs are to be kept in order to enforce the sanitary regulations?—I am rather afraid that that would be resisted. I should be afraid to introduce a system of licensing. I may say that the difficulties of disinfection would be very considerable in the West of Ireland from the way in which pigs are kept in small houses badly paved, very often not paved at all, sometimes in the residences of the peasantry. The question of disinfection is a very difficult one as regards the keeping of pigs in Ireland.

2590. Could nothing be done in towns where pigs are sometimes kept in considerable numbers together by pig feeders and dealers under very filthy conditions?—The Public Health Act, if carried out, would do a good deal to settle that matter, but unfortunately the Public Health Act in Ireland is not carried out very satisfactorily. I think there is a provision against keeping pigs at dairy places. I do not think that the keeping of pigs in large cities is generally practised. In some of the smaller towns a good many pigs are kept, and there possibly licensing would be useful, but I believe the provisions of the Public Health Act, if carried out, would do a good deal to minimise disease or risks in those towns.

2591. You are aware that the precautions under the Public Health Act can only be enforced if it can be proved that there is a nuisance such as will injure human health?—Yes.

2592. Do you think that that could be extended to allowing the Public Health Act to be enforced if it could be proved that it was likely to keep up the diseases of animals?—My legal knowledge is scarcely sufficient to warrant my answering that.

2593. I am not putting you a question of law as to whether you think that could be done now, but as to whether you think it would be desirable to have the law altered?—Yes, I think it would.

2594. (*Sir W. Kaye.*) You said, after the outbreak in 1866, you had your premises disinfected?—Yes.

2595. In what way?—In the close houses we burnt a quantity of sulphur, having closed all the openings of the premises, and we used carbolic acid very largely; of course having thoroughly cleansed the places and washed the floors thoroughly before the burning of the sulphur.

2596. You found that effective?—We have not had a single case of disease since.

2597. Do you think that the outbreaks are fully reported in the country?—I do not think they are; in fact, I know they are not.

2598. You know they are not?—Yes.

2599. For what reason would you say that?—There is a difficulty. There always has been a difficulty in getting reports of such matters in the country. Possibly the people are afraid that the compensation paid will not be sufficient, and in many cases they do not like to have it known that they had disease in the neighbourhood. But I think the question of compensation has much to do with it. Also, I doubt if they understand the law sufficiently. I think there is a good deal of ignorance on the matter. In fact, I have met with cases where people I have been satisfied were completely ignorant of the requirements of the law.

2600. You are clearly of opinion that if compensation were adequately paid it would be an incentive to the people to report more fully?—Most certainly.

2601. Now, what would be about the amount of compensation?—In Ireland there are not many breeding establishments where there are very valuable pigs. It would be a question of compensating for the present value of the pigs and the loss that might occur through the killing of them. The delay in keeping up, or at least in consuming the food that the pigs were consuming, should be taken into account in the valuation. I am rather afraid that the present value allowed by the Orders is scarcely sufficient.

2602. You know the present compensation is 2*l.* and 4*l.*?—Yes.

2603. What would you say would be a reasonable addition to that maximum of 4*l.*, taking it all round, you know?—For compulsory slaughter I think that a maximum of 7*l.* would be ample. I think that the compensation actually paid would be found to be somewhat under that, but the maximum should be a satisfactory one.

2604. Have you any doubt at all in your experience and knowledge of this disease that, if proper steps were taken, it might be stamped out just as freely as pleuro-pneumonia?—I am perfectly certain that this disease might be stamped out of Ireland in a very short time if stringent proper measures were taken for the purpose. I have no doubt whatever about it.

2605. (*Mr. Wardlaw Ramsay.*) I should like to ask you more for information, not knowing much about Ireland, a few questions. Pigs are kept to a large extent in Ireland, I believe?—Very large.

2606. Generally in large or small numbers? Are there many large herds of pigs?—No, nothing like what you have in this country.

2607. It is almost the exception for a householder, however small, not to keep a pig?—In the country, yes.

2608. As a rule, do they breed their own pigs?—No, there are but very few cases where the farmers keep more than one or two sows. The young of those sows are sold at the fairs and markets to the peasants, the small holders and labourers, who buy them singly and in couples.

2609. Then the peasant, when he wants a pig, goes to the market?—He goes to the market or fair.

2610. And buys it?—Yes.

2611. Does that imply that there is a considerable amount of traffic in pigs?—Yes.

2612. Are they brought from long distances, or do the farmers supply the pigs to the peasants in the neighbourhood?—As a rule, the pigs are sent to fairs and markets, and very often long distances.

2613. By rail, I suppose, when there is rail?—Not at all. There is very large traffic in young pigs by rail. They are generally sent in railed carts.

2614. In which part of Ireland is there the most traffic in pigs?—I should say the west and south-west, Connaught and West Munster.

2615. Is that the part of Ireland in which there is most disease?—Yes, I think so.

2616. Where there is most traffic?—Yes, and where there is the largest number of pigs, and where the pigs are more distributed.

2617. As a rule, do the cottagers sell their pigs when they are fat, or do they kill?—They sell them when they are fat.

2618. They do not kill them?—Not as a rule. There is a growing trade at the present time along the Midland Great Western Railway in killing pigs, and in sending pork over to the English markets.

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That is a growing trade, but that is done only along the Midland Great Western line.

2619. It being the case that there is a considerable amount of swine fever in the west, and they send their fat pigs to market, there must be a considerable number that come into the markets in a diseased condition ?—I should not think so at all. I have seen a good many pigs in the markets, and you very rarely find diseased pigs in the market.

2620. Is there any system of inspection with a view to detection in the market ?—I do not know of a systematic inspection. Of course, the travelling inspectors of the veterinary department of the Privy Council drop in occasionally, but I do not know of any systematic disinfection.

2621. (*Mr. Stephenson.*) In your evidence you said that one of the earliest symptoms was a bloody discharge from the nostrils ?—Not the earliest, that would come after the marks had appeared.

2622. The third or fourth day, may I take it at that ?—A little later than that.

2623. Bloody mucous from the nostrils ?—Yes.

2624. Is that a common symptom of swine fever in Ireland ?—Yes, I have noticed that very generally.

2625. You say nothing about diarrhœa ?—I omitted to say that there is a very bad form of diarrhœa.

2626. Do you get paralysis of the hind legs, partial or complete ?—I have not seen much of that. The animal lies down a good deal, and generally there is a stiffening, but I have not noticed complete paralysis.

2627. Is it common to have cough ?—Yes.

2628. Have you ever seen the *post-mortem* lesions ? Have you made *post-mortems* and seen them ?—Not very critically.

2629. Then it would not be fair to ask you anything about them. In your opinion, is there a want of uniformity in the way the disease is handled in Ireland by the Boards of Guardians ?—No, not so much that, as the neglect altogether.

2630. Of the owner of the pig ?—No, not carrying out the orders sufficiently strictly. In many cases they are not carried out at all.

2631. That is really a want of uniformity, some authorities do all that can be done, and others do little or nothing ?—Really, I cannot at the present time call to mind any place where I consider the thing is properly dealt with, and I know looking at the returns that are published by the veterinary department of the Privy Council, that there are districts from which no reports come, where the disease exists extensively.

2632. In your examination-in-chief you say you think the veterinary local inspectors could carry out the work of stamping out this disease ?—With the constabulary, I believe they could.

2633. With the constabulary ?—Yes.

2634. And that there was no occasion to send the viscera of the dead pigs to Dublin ?—I should not think there would be.

2635. Do you believe the local veterinary inspectors? ——Excuse me, I say that the local veterinary inspectors that would be there to carry out the Act, or at least the orders sufficiently stringently, should be men approved of by the Privy Council.

2636. That modifies your answer considerably, because I was going to ask you if you thought the local inspector was fully qualified to diagnose, and handle swine fever ?—Many of them are, but a great many of them are not, I should have a uniform system of good inspectors, who would be well up to their business to carry this out. That would be absolutely necessary.

2637. Then you also suggest that there should be a continuous general system of inspection ?—Yes.

2638. How could that be carried out ?—By the local inspector.

2639. The veterinary inspector ?—The veterinary inspector, that is, the local veterinary inspector, direct from the Privy Council, assisted by the constabulary. I believe that the constabulary are intelligent men, and knowing that orders came from head quarters would carry out their duties more efficiently.

2640. May I take it that in Ireland the constabulary and the local veterinary inspector would be familiar with the places where pigs are kept ?—Yes, undoubtedly.

2641. Now as to disinfection, I understood you to say that you burnt sulphur, that you fumigated with sulphur ?—Yes, in the close houses.

2642. Could you do that in cases where the pig is kept in the cottage of the owner ?—In the cottage, yes, but not in the sties. That is rather difficult. I daresay it would be a service to the cottage to have it done.

2643. Generally ?—Yes.

2644. What would you do in cases where the pig has a house to himself outside ?—There is no uniformity in that. In some places they are merely a sort of cairn of loose stones thrown together.

2645. What would you do in those cases ?—Those places should be thoroughly cleaned out, the manure and filth cleaned out, and possibly washed with lime and washed with carbolic acid, but I do not think that the burning of sulphur would be of much effect in a place of that kind. I think carbolic wash would be better.

2646. If the sty was made of wood would you burn it, if you could ?—I should.

2647. Now, about carbolic acid; have you ever used carbolic as a disinfectant in swine fever cases ? —Along with the sulphur in the open houses, I have washed the floors and walls with carbolic acid.

2648. What have been the after results ?—Do you mean as regards the infection ?

2649. Has it any poisonous effect ?—No, I have never known it.

2650. Not on the poultry ?—Not at all.

2651. Nor on the pigs themselves ? – Not at all.

2652. You think that if this disease was taken properly in hand it could be stamped out in Ireland very quickly ?—I do.

2653. (*Mr Joseph Smith.*) In the west of Ireland these little men or little peasants and farmers and people that have an acre or two, live detached about the country ?—Yes, in many cases.

2654. Do you think that some sort of inspection could be carried on there ?—I quite think it.

2655. It is a fact, is it not, that in many cases the pigs live with the people ?—Yes, I have gone into a place and found the centre of the floor prepared for the accouchment of the pig.

2656. It is not at all an uncommon thing to see the pigs running in and out of the house in large districts in Ireland ?—Not at all.

2657. Still you think that some regular system of inspection could be carried out ?—I feel satisfied that it could be. I have no doubt about it.

2658. People are very jealous, especially of the constabulary, are they not ?—The constabulary I think would be well received, especially when the people not to know that no harm was intended, that they got full compensation. The constabulary are very fairly respected in a great many districts.

2659. You were speaking just now of disinfection. Have you any knowledge, or taken any part in disinfecting many sties and many places in the country ? —No, that does not come within my duty, but I have had several cases with foot-and-mouth and pleuro-pneumonia and this swine fever, and I have had considerable success in disinfecting.

2660. You have not traced the outbreaks of disease much ?—No, we had four cases of pleuro-pneumonia where the place had been free from it, and we have never had it since.

2661. The little pigs that are sold in the fairs are generally taken in carts ? – They are taken in carts.

2662. The man that breeds them takes them and

retails them out?—Yes. The small people buy those pigs singly, or generally, in pairs, and if they have not a donkey cart or a cart of their own, they will get a neighbour to carry the pigs home to their place.

2663. The man who breeds them takes them to the fair?—He takes them to the fair in the cart.

2664. And retails them out?—Yes.

2665. Then they go home to the cottagers?—Yes.

2666. And when they are fat they are taken to a fair?—And sold. In the large fairs, the pig fair is held the day before the cattle fair.

2667. It is no uncommon thing at the pig fairs to see a train load of pigs or two train loads of pigs?—Yes, you will see it very often; there are many cases like that.

2668. Then they go right away for export, or else to the bacon curers?—Yes, quite so.

2669. (*Mr. Carrington Smith.*) Have you any dealers in store pigs who attend these markets or fairs who collect the animals from the farmers?—There are some, but it is not general. There are some who do that, and that is, I think, more in the south of Ireland. As a rule the farmers take them to the fairs and markets. There are dealers, but that is not very general.

2670. You do not know then whether disease is disseminated by dealers who get aggregations of pigs in the fairs?—I should say it would be a very good means of explaining it.

2671. You do not know that it is done?—I have not had knowledge of its being done.

2672. Do you know whether many store pigs are exported from Ireland to England?—I could not say the number, but I should not think there are many store pigs sent to England.

2673. There is no large amount of dealing done by dealers in exportation?—Not in store pigs I should think; they generally are sent for killing in England.

2674. What do you mean by inspection of pig-sties, do you mean universally or only in suspected cases?—I should say that there ought to be a regular irregular system; that is, the system of inspection should be understood, and the inspector should go about irregularly to visit places.

2675. Then you would give the constabulary or the local veterinary inspectors a power of entry, whether there was a case of suspicion or not?—Quite so; I think that would be necessary.

2676. What is the system of compensation pursued in Ireland? You say it has not done much, but it has done little. In case the local authority does order slaughter, does the local authority order slaughter of in-contact animals or only of diseased animals?—They can do it, it is permissive.

2677. But do they—that is the point?—I am afraid they do not. In fact I do not know of cases where it has been done.

2678. Then, practically, very little compensation is given either for diseased pigs or for in-contact pigs in Ireland?—I believe that is so; but Sir William Kaye could speak upon that matter, because it is dealt with by him.

2679. Supposing the limit of value was raised up to 7*l.*, and compensation was given not only for diseased pigs, but for in-contact pigs, do you think that the public generally would work with the local authority and help to stamp out the disease?—I think so.

2680. (*Mr. Shaw.*) At what time of the year do you find the disease most rife in Ireland?—Generally in the summer and autumn. The autumn, I think, is about the worst as far as I can see.

2681. Do you think that close breeding in Connaught has anything to do with swine fever?—I should not think so at all.

2682. You would not think that?—Possibly from weakening the animal by that system of breeding, it might render them more liable to contagion, but I should not think for a moment that it would originate the disease.

2683. I did not mean that, but it would continue the disease?—It might render them more liable to contagion.

2684. You say you would give the police the right of entry to private places and dwelling houses?—Yes, I should.

2685. You would give them that without the inspector being present, I presume?—Yes.

2686. The difficulty would be that the police might get some private information that a man's pig is diseased; the inspector might not be within miles of him, and it would be desirable that the police should get permission to enter?—That is one of the points I had in my mind. The police should have the right of entry.

2687. Do you think it is known to the pig-keeping community generally that there is such a thing as compensation to be had for pigs that had swine fever?—I have met with cases where it is unknown, where people are entirely ignorant that compensation could be paid for compulsory slaughter.

2688. Do you not think the majority of people in Connaught are entirely ignorant of it?—I rather think they are ignorant of it. Clare is the place where there is considerable ignorance.

2689. In addition to granting compensation, is it not important that the country should be informed that such compensation can be had if pigs are slaughtered?—Certainly.

2690. You were going to say something about Clare?—In the county of Clare I know from recent knowledge that there is a great deal of ignorance as to compensation.

2691. Is it not important that in addition to the promulgation of the law through the ordinary channels, posters and such like should be stuck up all over the country, informing the people that if swine fever exists on their farms and they report it they will be compensated?—Yes, I think so. In fact every means should be taken to make it public.

2692. In fact, if necessity required, those posters should be printed in Gaelic in the Irish speaking portions of the country?—There are some districts where it might be useful. It is wonderful how the compensation ideas spread amongst people.

2693. You say that it simply wants to be announced clearly to have it known all over the country?—Quite so; every measure should be taken to announce it.

2694. Are you in favour of the closing of fairs in the event of swine fever breaking out in a district?—I think that might be done by prohibiting the exposing of pigs, and that would not be a matter of such very great inconvenience as the closing of the fair altogether. I think that if the closing referred only to pigs it would be more easily carried out.

2695. I did refer to pigs. Of course I should not close the markets for cattle?—Certainly, where there is a considerable outbreak of swine fever I should certainly close the fairs or markets for pig selling.

2696. You mentioned that the disease was rife in West Munster; as a rule what part of West Munster do you refer to?—Clare, Kerry, but more especially Clare. I have known of cases in Cork; but in Munster, Clare is about the worst.

2697. You do not think that many pigs with swine fever are marketed in a live condition?—I do not think they are. I mean that possibly the animals may be marketed that have got the disease in an incipient condition, but I should not think that there are any cases—in fact, I should say that the buyers are sufficiently aware of the matter that they would not buy a pig having a swine disease in it. I should say that the sale of diseased pigs for slaughter is not at all general.

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2698. Then what becomes of the diseased pigs?—They die and are buried; they are thrown into the rivers and propagate the disease in that way.

2699. But there are not many of them killed at home?—I heard that in the old system in Limerick, and it was a very summary way, that if a diseased pig was sent into the city the authority (I do not know what the authority there was) took this pig and purchased what was known as a creel of turf; the pig was cremated and the owner of the pig was condemned to pay the price of the creel of turf.

2700. When was that in vogue?—That is perhaps 35 years ago.

2701. (*Sir Jacob Wilson.*) Was that at Limerick?—Yes.

2702. (*Mr. Shaw.*) Do you not think in many cases where the pig is got rid of it is in this way: the farmer simply sticks a pig and scalds it and then cures it for himself?—I have known cases where that is done, but I believe that now there is a general feeling that it is dangerous to use a diseased pig; but I think that they are sometimes buried, and, as I say, thrown into ditches; and, in fact, the matter is very badly managed.

2703. Then you would make the police undertake to see to that, if the inspector were not there to have that matter carried out according to the law?—I should certainly get the police into the service. I think they might be made very useful in dealing with it.

2704. A good deal has been said here before this Committee of the necessity of registering the dealers and inspecting their yards and carts; what have you to say upon that?—I was always in favour of the licensing of dealers and drovers. I think that they hitherto have been the means of spreading diseases of live stock very generally over the country, and I think that stringent regulations for them should be made.

2705. As regards the registration of boar stations—I mean places where boars are stationed—do you not think that the boar is very frequently the cause of the infection of pigs, sows coming to him being infected?—I quite think so.

2706. Do you think it would be desirable that some system of registration should be enacted for that purpose?—Yes, I think that would be very useful.

2707. Do you think that pigs affected with swine fever can be cured?—Yes, I have known cases.

2708. Suppose a pig is diseased with swine fever, and a farmer has it and kills the pig and scalds the hair off, do you not think that pig can be cured and sold?—Yes, I think it may be safe for eating. I think so.

2709. Do you not think that the living pig can be cured; I mean medicinally?—Yes, I should think that; in fact, I have known cases, but they are not worth the trouble.

2710. They do not pay for the trouble, after it?—No, they are not worth the trouble.

2711. That is my experience?—I saw some cases where they have recovered from it, but they are never worth the keeping.

2712. This question is of great importance to the country I represent?—I think it is of the utmost importance to Ireland.

2713. Would you state in what way—just give it us as shortly as possible—you would stamp out this disease?—I should mark out districts in the country to be under the supervision of skilled, clever veterinary inspectors.

2714. To be appointed by whom?—To be appointed by the Privy Council. These men should have where necessary skilled assistants; the constabulary should be directed to co-operate in every way and, if necessary, rewarded for any extra work they might have to do.

2715. Would you reward by results or would you reward by paying for their time?—I do not think it would be a matter of much consequence which way that would be done. Possibly time might be looked upon with least suspicion in the country, and the people might take the police interference when they are paid by time, rather better than when they are paid by results, when there would be more suspicion of their making cases.

2716. Does that finish your answer?—Generally that would be the line.

2717. You have defined already the compensation you would give?—I think a maximum of 7*l.*

2718. In order to make people report their cases would you be very severe in the matter of punishment for non-compliance with the law?—I should certainly endeavour to have the law carried out as firmly and as rigidly as possible, and all cases of infringement should be dealt with most severely.

2719. Do you not think that the law as it stands at present is very leniently administered as regards punishing for not reporting?—Very loosely I believe.

2720. (*Sir Jacob Wilson.*) I gather from a question which you answered a little while ago that experience showed that there was a greater amount of swine fever in Ireland during autumn than at any other time of the year?—I think so; during the late summer and autumn.

2721. Is that due to a greater movement in consequence of the purchases and sales of pigs going on at that time of the year?—That would account for it, because at that time the small people, as the potato crop is fit for gathering, buy their pigs. Also scientific evidence, I dare say, might show that that was a time more favourable for the disease. I think that the possibility of the larger numbers being moved about at that time would have something to do with the spread of the disease.

2722. I gather from another answer from you that you consider that the disease now is well marked and well understood; do you mean as compared with a few years ago?—Yes.

2723. But do I gather further that in your opinion it is well marked in the living animal?—Yes.

2724. And, therefore, you yourself would be in a position to pronounce the disease to be swine fever in the living animal?—Yes, I think so; I feel pretty certain of that.

2725. Is it not a disease easily confounded with other diseases?—I do not think so. I think that swine fever is a thing that is almost unmistakeable. That is my experience of it.

2726. Do you not consider that you have difficulty in pronouncing a case to be swine fever without a *post-mortem* examination?—No, I should think not.

2727. Is swine fever regarded as a disease of any great importance in Ireland?—I am afraid that the people do not think of the great importance of the question. Of course the men that suffer, suffer with small numbers. Say a cottager has two pigs and he loses one; that is not so marked. But if a whole herd were to be affected and killed, that would be a more marked thing.

2728. As a matter of fact, I believe you send one-half of the pigs in Ireland to England for market?—Possibly that might be a correct account.

2729. You do not know?—No, but I should say that would be possibly about the number.

2730. Therefore, I take it, it is of the utmost importance to the health of the stock of both countries that there should be uniformity of action between England and Ireland?—Certainly.

2731. You said that you desire to give the police more responsibility than they at present possess?—Yes, in this matter.

2732. Then do I gather that they are not employed in Ireland at present in the prevention of swine fever?—Well, in receiving notices, but as far as I understand they are not required to act the detective in the matter.

2733. Are they not employed for the purpose of tracing the origin of the disease?—I dare say in some cases they do it, but I cannot say whether they are directed to do it.

2734. But whilst one local authority might require it to be done another does not?—Yes.

2735. (*Sir W. Kaye.*) Upon this question of the police I do not know whether you are aware that under the 50th Section of the Act of 1878 the police are required to execute the provisions of the Act and the Orders in Council, and advantage is taken of that by the veterinary department all round?—I am aware of that, but I had overlooked it.

2736. Is Glasnevin within the Dublin Union?—Yes, North Dublin.

2737. Have you any reason to believe that the disease in your neighbourhood has been brought from the city?—In the case that I have mentioned at the farm it has been from the city market.

2738. Have the majority of cases within your knowledge occurred in the premises of the smaller peasants?—Yes, in many cases; I have known it also in the case of large farmers, but very generally in the case of small farmers.

2739. Have you had many instances of the recurrence of disease on those small premises?—Yes, I have known cases in the county of Mayo where the pigs would be sold this week, or possibly have died this week, and well within a month; some other pigs would be brought in, and those would die.

2740. And you gather from that that the disease has been communicated from one to the other in the sty or from an outside source?—In the sty.

2741. Am I right in believing that the majority of the pigs in Ireland are white breeds?—In the West of Ireland they are not so. In consequence of the action of the Limerick bacon curers the white breeds are spreading in the West of Ireland now, but in Sligo, North Mayo, and that district they are what are called belted pigs, that is, black at each end. That arose from the importation of Essex pigs some half a century ago, I think.

2742. Do you know from your experience whether any one breed is more susceptible to disease than another?—No, I should not think that they are so.

2743. Are you aware whether in Ireland the markets are a frequent source of spreading the disease?—I should think that they would be.

2744. I asked you whether you know in your experience?—I have not had any experience of that excepting that I have known cases where pigs bought at markets have become affected directly they were brought home.

2745. Are there any requirements in Ireland for the markets to be specially paved or regulated in a sanitary way for sanitary purposes?—I am not aware as to that except with reference to the metropolitan market and perhaps the large towns, but I cannot speak positively as to whether that is general or not.

2746. Do the markets or fairs in Ireland very frequently take place in the open streets?—I was just going to say that that is generally the case through the country. There are some places where what are called fair greens are established, but as a rule the market is in the town, and almost invariably the sale of pigs takes place in the towns.

2747. In prescribed parts of the towns, I take it?—There are very few places where there are prescribed parts of the towns. It is a matter of custom all over the town.

2748. Then in the event of the disease of swine fever breaking out into the markets so-called of any of those towns you would be disposed to prohibit further markets for some time?—Certainly, I should say so.

2749. But would you at the same time permit the sale of cattle or sheep to be continued?—Yes, considering the great inconvenience and the difficulty that might otherwise arise I should allow the cattle and sheep markets to go on.

2750. Considering the particular character of the disease and the means by which it is capable of being communicated, would you not think that attended by considerable risk?—Not very great risk, but of course if the thing were done in a thorough manner all the cattle and sheep should be restricted for some time. But considering the difficulties that that would give rise to, I think that the prohibiting merely of the pigs would be for the present more acceptable.

2751. Knowing your very large experience, your duties taking you all over Ireland, I would ask, have you known any case in which markets for pigs have been prohibited?—No, I have not known cases of that.

2752. Seeing that you have been disposed to admit one whilst you do not admit the other and would prohibit markets when there was an outbreak of swine fever; does that not account for the many mysterious outbreaks that take place from time to time, do you think?—I should think that the movement of cattle from places where swine fever is prevalent, might possibly carry the disease.

2753. Are you of opinion that slaughter alone would have any material effect in exterminating the disease?—The slaughter of diseased animals and animals in-contact?

2754. Yes?—I feel certain that that carried out judiciously would stamp out the disease.

2755. When you say "judiciously" I gather that you mean restriction on movement and sanitary precautions, and the payment of compensation?—Yes.

2756. But most important of all would be as you say, the payment of liberal compensation?—Quite so.

2757. What is the present condition of Ireland with regard to swine fever within the last three months may I say?—There are weekly returns.

2758. I do not mean the returns; I mean the condition of the health of the pig population of Ireland?—I have not been about very much during the past two months.

2759. I gather you have not heard of any increase in the disease of pigs there?—No, I have not.

2760. Do you think there is any decrease in it?—I should not think there is. In fact, I feel perfectly certain that there is no decrease in swine fever in Ireland.

2761. You have expressed your great confidence in the possibility of exterminating the disease in a very short time by putting into operation certain methods?—Yes.

2762. If that were so then I take it you would not have hereafter the same necessity for all the veterinary inspectors or so great a cost as you refer to?—That is so.

2763. (*Professor Brown.*) I understand that you think swine fever is very easily detected in the living animal?—I think so.

2764. Will you tell the Committee what signs you as a practical man would accept as proof that the disease exists?—First the general dulness of the animal; then the discoloration about the neck and the body; then the diarrhœa; then the discharge, although that is not invariable, but I have seen a good deal of it, from the nostrils and from the eyes; the animal lying down, of course, having given up feeding.

2765. Have you noticed any loss of power of the hind extremities?—Yes, but not to the extent of complete paralysis, as Mr. Stephenson asked me just now.

2766. Those symptoms which you describe are indicative of the advanced stage of the disease?—I have noticed in the early stages the purple blotches coming.

2767. But you are aware, probably, that those purple blotches come out in other diseases?—Yes, quite so.

2768. I think you said that you would rely very much upon the constabulary?—Yes.

2769. From your experience of them, have you reason to conclude that they are extremely efficient in assisting in carrying out those regulations?—Yes, under direction.

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2770. In fact, you would say that for that purpose they could not be very well superseded by any other body ?—I do not think they could, under proper direction.

2771. Do you think it would be of any use stamping out swine fever in England without also stamping it out in Ireland ?—I think it would be very serviceable to Ireland, but I think it would be very desirable that it should be stamped out in England as well, because as we draw upon England for high class breeding animals it would give us a good deal of trouble in keeping animals out of Ireland.

2772. We should probably have more trouble in keeping out the Irish animals ?—I think the risk of disease from England to Ireland would be greater than the risk of disease from Ireland to England, because as a rule the pigs coming from Ireland to England are sent for the purposes of slaughter. We get breeding pigs over from England.

2773. (*Sir Jacob Wilson.*) By permission of the Irish Privy Council ?—Yes.

2774. (*Professor Brown.*) Do you not send a good many store pigs to this country ?—I do not think the trade in store pigs is very much.

2775. (*Mr. Shaw.*) Do you mean to this country ?—To this country, yes. It is a very small matter.

2776. (*Professor Brown.*) In making an attempt to stamp out swine fever in Ireland would you employ the local veterinary surgeons as much as possible ?—Where efficient and where approved of by the Privy Council. I know there are many cases in which I certainly should not employ local men.

2777. But wherever you considered them to be efficient you prefer employing them ?—Wherever the veterinary department of the Privy Council considered them efficient I should certainly employ them.

2778. You would rather do that than have a certain number of veterinary officers appointed by the Privy Council to go about the country ?—I think it would work equally well, and it would be a saving of expense, and possibly might be more acceptable to the districts.

2779. And certainly would be more acceptable to the members of the profession practising in those districts ?—Yes, quite so ; but in many cases I may say that men are employed as inspectors under the local authority that would not be quite efficient in this work.

2780. But taking it as a general principle, without reference to any particular country or place, would you consider it desirable to employ local veterinary surgeons rather than to supersede them by a limited number of travelling veterinary inspectors appointed by the central authority ?—I think it would be desirable that these men should act under and with the Privy Council, and be approved of by them.

2781. The men employed in that way over the country would, for the time being, act as officers of the Central Department ?—Exactly.

2782. That is your view ?—Exactly.

2783. (*Mr. Joseph Smith.*) With reference to compensation, from questions put to you by Mr. Shaw, I gathered that you thought that these farmers could get compensation if they gave notice, but it rests with the local board of guardians, does it not ?—With the local authority, yes.

2784. Do you know of any case where the local authorities have given compensation ?—There have been cases where that has been done.

2785. But not as a rule ?—Not as a rule—not very much ; in fact, the Orders are almost inoperative.

2786. And therefore there is no inducement for anyone to give notice ?—No.

2787. If a man gives notice, is his place shut up for a time ?—Yes, for twenty-eight days, I think.

2788. (*Chairman.*) Who is the local authority in Ireland in a town as distinct from a country district. For example let us take, first of all, a large town like Limerick or Galway ?—There is a sanitary committee.

2789. Of the town council ?—Yes.

2790. We must not have any misunderstaning on this point. Take Limerick and Galway first. Would the local authority there be a committee of the town council or of the board of guardians. That is what I want to know ?—I think of the board of guardians ; I cannot speak positively that way ; I believe of the board of guardians.

2791. It is not the urban authority ?—No.

2792. I understood your answer just now to imply that it was the urban authority ?—No, it would be there under the board of guardians.

2793. Let us take Dublin ; what is the operation of the Act in Dublin ?—The Poor Law Unions have their sanitary authority.

2794. They are the authority for the purposes of the Act ?—Yes.

2795. And the same in Cork ?—The same in Cork.

2796. In fact, throughout Ireland it is a union authority, and not an urban authority in the towns ?—Yes, that is how I take it.

2797. (*Mr. Shaw.*) Do you not think that the country people in Ireland, as a rule, accept swine fever and such like diseases pretty much as they accept any disease, as a sort of necessary evil ?—That is so.

2798. They seem to think that it is necessary, that they cannot do without it ; like the poor, it will be always with them ?—Exactly they are in complete ignorance.

2799. Anything connected with disinfection is completely unknown to the people ?—Completely.

2800. And should be really taught to the people ?—Exactly. Possibly, beginning at a lower step, might even lead to cleanliness in houses.

2801. You do not think that these veterinary inspectors who are appointed by the local bodies need be permanent appointments ?—No, not in this case.

2802. Simply temporary appointments for the purpose of stamping out the disease ?—Quite so.

2803. I suppose that is on account of economy ?—Yes.

2804. (*Mr. Carrington Smith.*) Do you also find purple blotches in the case of swine fever ?—Yes, more or less.

2805. Always ?—Yes, as a rule. I do not remember cases in which they did not appear.

The Witness withdrew.

MR. MATTHEW HEDLEY, called in ; and Examined.

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2806. (*Chairman.*) I think you are chief inspector of the Veterinary Department of the Privy Council in Dublin ?—I am.

2807. You are also, are you not, a Fellow of the Royal College of Veterinary Surgeons ?—I am.

2808. You have given very close attention to the whole subject of the diseases of animals ?—Yes, I have had to do so.

2809. You are aware that the subject matter of this inquiry is specially swine fever ?—Yes.

2810. Now will you, in the first place, tell us what, in your view, is the character of the disease, scientifically considered—I would say the origin and symptoms of the disease ?—The origin is supposed to be due to a micro-organism, but as to what micro-organism it is there seems to be considerable conflicting evidence between authorities ; consequently I cannot say from my own personal knowledge what organism may be set down as the organism of swine fever. The term swine fever appears to me to cover

more than one disease. The appearance of the skin is discolouration, and the discolouration often has been used simply without any further evidence, I think, to denote that the animal was suffering from swine fever, and it has been condemned as such. That is in some instances. We have other diseases, such as gastric derangements, which exhibit that symptom. "The "Symptoms of Disease" we issued from the Department some while ago, a copy of which I hold in my hand, and which, I think, it will be seen probably by Professor Brown and Mr. Stephenson, exhibits symptoms which are seen in other diseases besides swine fever. This was drawn up partly by myself, partly by my predecessor, and was drawn up with the intention of indicating such diseases as might be mistaken for swine fever, so that we might get cases of swine fever for certainty. Shall I read "The "Symptoms?"

2811. Yes?—"The disease usually assumes a rapid "and destructive form, the animal often falling down "and quickly dying without the least premonitory "symptom or even suspicion of its being ill; some- "times the affected pig drops dead while feeding; but "generally the attacked animal evinces sudden loss of "appetite, dulness, debility, smallness and frequency of "pulse, ears and tail motionless. In many cases the "animal's eyes become wild and projecting, their "margins of a dark red colour; the mouth partly "opened, reddish inside and generally frothy. Often "the animal endeavours to isolate itself from its com- "panions, buries itself in the litter, and objects to "move even under compulsion. The skin becomes of "a livid or reddish colour, particularly where it is thin, "as behind the ears, inside the thighs, fore legs and "on the stomach. The discolouration of the skin is "the most frequently present symptom. The breathing "is frequent and laboured. In many cases the pig "cries as if in pain; convulsions often precede the "appearance of reddish spots, which are darker on the "ears, belly, and inner surfaces of the limbs, and "wherever the skin is thinnest; paralysis of the hind "quarters is often present, the bowels become moved "involuntarily, the discharge from them being fetid "and bloody. There is a lowering of the general "temperature. The beatings of the heart cannot be "felt, and the animal dies in from 24 to 48 hours. "When recoveries take place the malady is of a mild "form."

2812. By whose authority was that statement issued?—It is issued by the authority of the Veterinary Department. That is denoted on the lower left hand corner. It was issued in July, 1892.

2813. (*Sir W. Kaye.*) Was there not this circular accompanying it (handing circular to the witness)?—The "Symptoms" which I have just read was sent round to the clerks of each local authority, and I think a letter which is signed by the Clerk of the Council, dated the 6th June, 1892. This circular was sent with a previous one, copy of "The Symptoms," which was amended subsequently.

2814. What do you consider to be the relation of insanitary conditions with the disease?—I believe that the insanitary conditions of the premises which are used for swine in Ireland are liable to spread the disease.

2815. But you do not consider that insanitary conditions can be regarded as the original cause of the disease in many cases?—No, I do not think so.

2816. What has been the effect in your opinion, or what is the effect in your opinion, of the introduction of newly-purchased swine into an old herd?—I think that the introduction of newly-purchased swine from strange places would be liable to introduce disease into that herd, and it would be a source of infection.

2817. Have you had any cases within your personal observation of that description?—Cases of that description have come under my notice.

2818. Is there any case which you would like specially to mention as being of special interest that you might desire to give details upon?—No, I do not think there is anything particular. I know of cases where the disease has been introduced within a few hours after the introduction of the animal into the herd.

2819. The methods of housing swine in Ireland are very defective, are they not?—As a whole I think I may say that they are. I might classify them under three heads. There are the well-constructed piggeries which may be found in large institutions where there is a very large amount of offal and table waste which goes to supply these. There I do not think any fault can be found with the usual arrangements of the houses. Then we come to a second class, which belongs to the farmer, where the walls are constructed of either wood or earth or some similar substance, and the floors are little better than earthen floors; they are very porous. Then the last class, and in some parts of the country the most generally found, is the residence of the cotter. The pig is allowed to come in and take his occupation of a portion of the premises during the night time and during the day time he walks about either in or out of the house or round the immediate surroundings of the place.

2820. Do you consider that there has been an improvement of late years in Ireland in these matters?—Yes, but I do not think that the improvement has been as great as would be necessary.

2821. I mean is there any tendency on the part of the cotters to build better accommodation for pigs?—Probably where the inhabitants have become owners of their own land say through the Land Court where they are purchasing places, there is a tendency to improve their holdings.

2822. That is important. You consider that their security does give them a tendency to improve matters?—Certainly.

2823. Have you observed any improvement since the Land Acts in regard to that matter on the part of those who are not purchasers?—No, I cannot say that I have.

2824. Now will you describe to the Committee the course of trade in Ireland in regard to pigs as to fairs and matters of that kind especially?—If I were to commence taking the pig from his home he generally commences his journey to the fair, according to the distance, either the night before or probably on the same morning, and he is either walked or he is taken in a cart or creel. Having arrived, the fair usually takes place in the morning early, particularly if it is some distance from the centres of collection. The centre of collection I refer to here as the place where swine are dealt with, either to be manufactured into bacon or to be exported to some part of Great Britain. When they are exposed for sale I think, with very few exceptions, they may be said to be sold; few swine return home. They are conveyed then from the fair, which fair, by the bye, is usually held in the public streets, and the swine are probably not taken out of their carts, or if they are it is just simply for a moment, on to the road, and then probably put back; as there are not fair arrangements, the safer place is to retain them in the cart. This also offers a useful means of conveying them either to the station or the steamboat. They are then conveyed by rail to one of the large slaughtering districts, say Limerick, Cork, Waterford, Dublin, or some other place, such as Drumsna or Ballina, or a place of that description for slaughter. If they are not suitable for breeding they are either not retained there or are fed until they are fat, or if they are not likely to be dealt with in that way profitably, they are often disposed of by the pig buyers, who are commission agents of the larger owners. They are then exported if they are suitable for what is known as the British trade. In some cases they are slaughtered and sent over as green bacon, but that is not a very frequent course.

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2825. You have alluded specially to the trade from Waterford to Cork, and also to Stranraer; is there any distinction in the method in which the trade is carried on. Has the trade, for example, by Waterford, any special features as compared with that by Larne and Stranraer?—Yes; the larger number of swine are nearer to the south than they are to the Larne and Stranraer route. The large slaughtering establishments are situated in Limerick, with branches in Cork and Waterford. That is really the reason why the larger number of swine go to those places. These are also ports, and as Waterford is much nearer to England the sea passage must necessarily be shorter, and it is desirable to curtail the sea passage or travelling as much as possible.

2826. There is a very large trade to Scotland, is there not, by the north?—I have not statistics just before me now, but I do not think that the trade to Scotland is so very large as compared with the trade to England.

2827. Are you satisfied with the regulations in regard to cleansing and disinfection. There are different heads; tell us something about railways and their vehicles, pens, steamboats, and dealers' carts, which are a very important matter?—Under the Animals (Ireland) Order there are certain regulations laid down. If the regulations as laid down by the Animals (Ireland) Order of 1880 are carried out in connection with the railways and steamboats, then I think that everything that could be desired is met. Take for instance the pens in which they are usually retained for a while until they are loaded into the trucks. The pen has to be cleansed first of all, "all parts of the pen with which "animals," well swine are animals according to the definition of the word; "or their droppings have come "in contact, shall be scraped and swept, and the "scrapings and sweepings, and all dung, sawdust, "litter, and other matter, shall be effectually removed "therefrom." "The same parts of the pen shall be "thoroughly washed or scrubbed or scoured with "water." "The same parts of the pen shall have "applied to them a coating of lime-wash." Then to make certain that the scrapings and sweepings will do no injury afterwards—"The scrapings and sweep-"ings of the pen, and all dung, sawdust, litter, "and other matter removed therefrom, shall forth-"with be well mixed with quicklime, and be effectu-"ally removed from contact with animals." There is a similar regulation to that in connection with the cleansing of vans, and I hold that if that is thoroughly and honestly carried out that it is as much as we could ask a railway company or a steamboat company to do. Turning to the creels, the carts, there is not any regulation, and I think it would be rather difficult, in many cases, to deal with them, because the carts are the property of small farmers. They bring in the creels for the purpose of conveying the swine, and then afterwards carrying home the necessary things that are required for the household.

2828. Have you then nothing in Ireland like the English Order, No. 3701, relating to the cleansing and disinfection of carts and vans?—Yes, we have for the cleansing of vans.

2829. And dealers' carts; I will just read you the wording of the English. "Without prejudice to the "provisions of Article 109" (that is the previous Order), "and in addition thereto, any local authority "may, for the purpose of preventing the spreading "of swine fever in their district, make, from time to "time, such regulations as they think fit for re-"quiring the cleansing and disinfection of vans, carts, "or other vehicles used for carrying swine, or of "ropes, nets, or other apparatus used in the con-"veyance of swine on land, otherwise than on a "railway"?—I think there is a regulation which is is very nearly the same. It is very rarely that the Board of Agriculture passes an Order that we do not follow as near as it is possible, considering the differences between the two countries; but I cannot, at the present moment, point it out.

2830. Do I gather from your previous answer that it is found difficult to enforce that order against small dealers?—No, I do not think that the local authorities have exercised the powers which are given them by the order.

2831. Do you consider that a more stringent exercise of those powers whether by the local authority or by any other authority would be desirable and possible?—Yes, if the stamping out of swine fever was determined upon, I think it would be necessary to take some other step than that, some other step than we are at present taking, but as to whether it would be policy or not, I would rather withhold my opinion. I think it would be met by many of the individuals with strong objection.

2832. Do you consider that it would be possible to take stronger measures beforehand, to prevent the conditions arising which tend to keep up disease, such as a more stringent sanitary inspection, and possibly the licensing of premises where pigs are kept, especially in towns?—I am quite satisfied that if that could be worked, it would be most desirable, but I am also satisfied that it would be an extremely difficult measure to work in Ireland. First of all you would have to define what a pigsty is, and that would be very hard. Take the cottages, for instance, of people in the remote portion of the west. You would have to define the whole dwelling of the individual as a pigsty; and it would be objectionable from many points of view to have to take such a step as that. The man would have to register his residence as the residence of his swine. I can see very well it would be a most desirable thing if it could be worked, but I think it could not be worked reasonably in Ireland in the country districts. In the town districts registration might be useful, but I think that comes under the Public Health Act. I think that they already make regulations which deal with the keeping of swine, within certain districts. The urban sanitary authorities, and the cities, and the corporate bodies, I think, do make regulations at the present time, but whether they ask for the registration of those places or not I really cannot say.

2833. Now, I would like to ask you your opinion with regard to the best methods for stamping out the disease in future. We have been told by the previous witness, and practically by yourself, that there is a great deal of remissness in Ireland in regard to carrying out the provisions of the law in regard to swine fever. Can you make to us any suggestions from your experience as to the best plan to adopt, both with regard to the authority and the measures to be carried out by the authority, whatever it is?—I have no hesitation in saying that the present system is not that which could be desired, because the regulations which are in existence are divided over so many different bodies. In Ireland every Board of Guardians is a local authority, and there are so many circumstances considered by them as to whether they will put into force certain regulations or not. I think I am correct in saying there are 163 local authorities in Ireland, and out of that number I think that there are only about seven who pay compensation and do more than any of the other local authorities to try to get rid of swine fever. Those local authorities I may mention, Newcastle, Kilmacthomas, Waterford, Naas, Killena, Rathdrum and Shillelagh. In looking over the number of outbreaks which they have had, I find that since the Order of 1885 passed, they have fluctuated in the case of Newcastle West from 10 to 32 outbreaks; probably one year there was 10, another year there were 32 outbreaks, and the numbers vary between 10 to 32 during the period from 1885 to the present.

2834. (*Mr. Joseph Smith.*) Per annum?—No; it means that one year there were four outbreaks; another year there were 13 outbreaks, and the

number fluctuated between four and 13. The full statistics I believe will be handed in, showing exactly what number of outbreaks occurred in each of these unions in any particular year. But it does not follow, as will be seen by the statistics, that the largest number of outbreaks was in 1885. For instance, with reference to Newcastle West, it does not follow that the largest number of outbreaks was in 1885, which showed 32, and that the lowest number was in 1892, with ten outbreaks, because probably the lowest outbreaks occurred about 1889. Therefore, the rise and fall in the numbers of the outbreaks has not been such as to inspire confidence that the Order was having some satisfactory effect. This might be attributed to the fact that the local authority,—having paid compensation, and having had the animals slaughtered, and imposed some restrictions without enquiring as to the source or origin of the case (where the animal came from and so on)—seems to think that their duty ceases with the payment of a sum of money. I hold, and I think that the Committee will agree with me, that unless we endeavour to find the source and trace it to its source, it is quite useless to pay, and continue to pay, thinking that the payment is a means of getting rid of the disease. This, consequently, makes me conclude that the local authority is not the proper authority to deal with it, that it could only be dealt with by some central authority, whether connected with the Veterinary Department or not. The regulations made should be uniform, dealing as to enquiries, compensation, regulations and general administration. Such steps have already been taken; there is precedent for it; I need hardly mention cattle plague and foot-and-mouth disease and pleuro-pneumonia; and so far as Ireland is concerned, an authority of that description has been sufficiently successful to recommend that similar steps to that should be taken in connection with swine fever, if it is decided to try and get rid of the disease. The declaration of infected places would be a question that would have to be considered, and I think it would be necessary, but as to whether the declaration should include more than the place where the actual swine was found, is one that could only be decided on visiting the place. Therefore, visits to premises would be necessary. It seems to me that the authority would require its own officers, or officers under its control, in the immediate vicinity of a place that was more frequently suffering from fever than others. The other local authorities who have not paid compensation decline to do so, because they feel at the present time that the payment of compensation means putting so much rate upon their district. They have to pay this compensation partly out of the rates and partly out of a fund which we have in Ireland, called the General Cattle Diseases Fund. To avoid having their rates drawn upon, they decline, as I have said. Then again, they are under the impression that swine fever is due to climatic influences. You often hear them say that it always comes at certain times of the year, when the weather is hot, or when the weather is cold, or when it is wet, or when it is dry, according to the union you happen to be making the enquiries in. There seems to be no decision.

2835. (*Chairman.*) Therefore, you favour very strongly the transfer of the administration of the Acts to some central authority?—I do, most certainly.

2836. You would, I suppose, leave the duty of reporting the cases to the individual, to the owner in the first instance, and then to the constable or local inspector to whom, in the first instance, he might report it?—Certainly, I think that would be desirable to continue what is being done at the present time. When an outbreak of swine fever occurs, the person having the animal affected reports the case to the police in the first instance; the police report to three, they report to the local authority, the local authority's inspector, and to the Veterinary Department.

2837. The next stage would be that the Privy Council in Dublin would send down a special inspector to report on the case, unless some portion of the entrail of the animal could be sent up in the first instance. Now, I want to hear your evidence on that part of the question; we have had a good deal of difference of opinion about that?—I think that when an outbreak is reported it is very desirable, indeed, to confirm or refute the opinion that it is swine fever, and that can only be done, I think, by *post-mortem* examination. I do not think that the examination of the skin, or seeing the animal with a patch of blue or a patch of red or some other colour, is, at any rate, sufficient evidence to say that that animal has got swine fever. I consider that an examination of the intestines, the heart, and the lungs is desirable. If the country was divided into districts and the central authority was satisfied that the officer which it had placed (I mean the central authority's officer) was quite capable of deciding whether the animal did suffer from swine fever or not, it would be necessary for the portions of the pig to be submitted to him for examination. In case there was any doubt I should then suggest that those parts should be sent up to the central authority as we have been doing in reference to pleuro-pneumonia in making an examination of the lungs.

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2838. Would the inspector on the spot be still appointed by the local authority according to your plan, or be the representative of the Privy Council?—I think that we must have the local authority inspector to deal with the same as we had during the stamping-out of pleuro-pneumonia, otherwise the system would become far too expensive. We could not put a veterinary inspector in every union. It might be possible to subsidise a local authority inspector in the first instance.

2839. That is what I want to bring out: whether you would make the local inspector, though appointed by the local authority, the representative of, and responsible to, the Privy Council in Dublin, when he makes a report as to whether in the first instance there is swine fever or not?—The inspector of the local authority at the present time is appointed by the local authority, but his appointment must be confirmed by the Lord Lieutenant, and the Cattle Diseases Fund pays half his salary. He is at the present time, as it were, half an inspector of the Privy Council Office. The General Cattle Diseases Fund pays a very large sum of money annually in salaries to various inspectors all over the country, and I would not propose to make him more a servant of the Veterinary Department than that, unless we required him to make a special investigation; and such men would be selected to do that as we from experience could depend upon.

2840. Perhaps you are not aware in what you have just described to us Ireland is rather a privileged country?—We like privileges in Ireland.

2841. Have you anything to say upon the question of the amount of compensation that ought to be paid?—Do you refer to the limit?

2842. Yes?—We limit it for cattle to 40*l.*, I believe, if I remember rightly, in connection with pleuro-pneumonia and slaughter, and so on. I think myself that a limit of from 7*l.* to 8*l.* would meet all cases, or with very few exceptions, probably where a sow with a pedigree came into consideration. That individual animal might be worth probably more than 8*l.*, but I think that from 7*l.* to 8*l.* would be a fair limit. Compensation is always a difficult question in Ireland—in fact, I think it is just as much in Great Britain, too. The value of the pig fluctuates very much there according to the supply and according to the demand. Then these things are influenced again according to the amount of food. If the potato season fails and there is a want of food for the pig, why, then, there is no use breeding swine; there are already a sufficient number of mouths to feed without increasing them by requiring swine to be fed as well, and,

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they must be fed upon the produce of the country. I refer to the 7*l.* to 8*l.* as the sum of money that I should propose to pay for contact cases; that is, if it was decided to slaughter all animals which had been in contact with a diseased one. If it was a case of slaughtering the diseased animals, I think that two-thirds would be a sufficient sum for payment for the diseased animal. Then would come the question as to whether payment on every animal that was slaughtered is to be two-thirds of 8*l.* I say, "No, "most decidedly not." The value of the animal must be decided according to the market value of swine of its class at about the date at which the slaughter should be necessary.

2843. You are aware what the limits are now?—Yes, I am; that 40*s.* is the limit for diseased swine, and that 4*l.* is the limit for healthy ones, but in my opinion these are insufficient.

2844. To go back to the trade with England, are pigs examined before they are put on board ship?—All swine which are exported to Great Britain are inspected by properly qualified veterinary inspectors at the port of embarkation, and that examination takes place and a licence is issued, and there is a veterinary certificate issued at the same time before they are allowed to go on board.

2845. Do those inspectors represent the central authority of the Privy Council?—They all do; they are all under the direct control of the central authority.

2846. That applies to the ports of Ireland especially?—That applies to the ports of Ireland.

2847. It is a port authority in fact. If a suspicious or diseased animal is discovered, are the pigs with which it has been in contact detained?—There was a special Order in Council passed in the year 1891, an amendment rather of the Animal (Ireland) Order, and the regulation there admits of animals not affected with both foot-and-mouth disease and swine fever being detained either at a market, a fair, or sale yard, place of exhibition, lair, railway station, wharf, or unenclosed land, cowshed, field, or park, and so on, if there is any risk of its having been in contact with or in the same yard, with an animal seized or so affected with swine fever. That consequently gives the portal authority, if he has evidence, power to detain not only the animal which is affected, but the animals which have been in contact with the affected one. The order goes on to state in what way the animals can be dealt with.

2848. (*Sir W. Kaye.*) I believe you succeeded the late Professor Ferguson, who was a very great authority on cattle diseases?—I did.

2849. Before that you were one of the travelling veterinary inspectors to the Privy Council?—I was travelling inspector from the year 1878 to the year 1888—ten years.

2850. There were two travelling inspectors; one was a layman, and you were the only travelling veterinary inspector?—That is so.

2851. You have handed in a statement of the symptoms of this swine fever as popularly drawn up. That was originally drafted by Professor Ferguson?—Yes.

2852. And amended by you?—There was very little emendation made by me, but still I did amend it a little.

2853. That was used for the purpose of trying to awaken the local authorities to take action with reference to this matter, and we found that they did not do it?—It was.

2854. And it was sent out repeatedly?—It has been sent out on more than one occasion as might be seen by the fact that one of those letters was dated the 9th June, and the "symptoms" were dated another date.

2855. Here is another, dated 21st October 1892. Do you consider those had any effect?—I say in some cases some of the local authorities printed those "symptoms," and issued them.

2856. You spoke about the Cattle Diseases Fund which is provided for Ireland and not for England; that is provided under the 83rd Section of the Act of 1878?—Yes.

2857. Would you just explain to the Committee what that is?—That is a levy made on all the Poor Law Unions.

2858. On all rateable property over the whole country?—Over the country collected through the Poor Law Unions.

2859. And that is done upon the certificate of the Chief Secretary that the money is required for the purposes of this Act?—Quite so.

2860. No larger sum shall be levied at any one time than shall be equivalent to a poundage of one farthing in the pound on the net annual value of the property in all the Unions?—That is so.

2861. Can you tell what the amount of one of those levies comes to?—About 14,000*l.*

2862. Of course the levy is only made when it is absolutely necessary?—When it is absolutely necessary.

2863. In reference now to these local inspectors who are paid a fixed salary by the local authority, they are appointed with the approval of the Lord Lieutenant, and everyone of those appointments confirmed by him?—Yes.

2864. Are you aware that half the salary is paid to the local authority out of this Cattle Diseases Fund?—I am aware that that is the case, that they are paid half by that fund.

2865. (*Chairman.*) And the other half is paid by whom?—By the local authority, by the rates of the Union.

2866. (*Sir W. Kaye.*) With reference to the number of Unions that pay compensation in Ireland I think you have the return there—you have a summary I believe?—I said there were seven.

2867. Have you enquired into the matter as to whether the reports of outbreaks were more freely given or in a larger proportion from those unions than from the unions where there was no compensation?—Certainly, because in unions where there is no compensation given there is not the slightest encouragement to report cases.

2868. You are satisfied that if it were thoroughly well known that compensation and fair compensation would be given reports would be more freely given?—Yes, I think that the statistics would go up in Ireland.

2869. And until you got people to report the outbreaks would it be possible for you to deal satisfactorily with the disease?—I do not think so.

2870. You said that you would divide the country into districts?—Yes.

2871. Do you mean by that—I presume you do—that you would allocate an officer of the central department to take charge of each of those districts locally?—Quite so.

2872. And in case where the *post-mortem* was made on the spot it should be only done by a veterinary inspector approved of by the Veterinary Department?—Quite so; that would be for the purpose of keeping the contents of the animal from being forwarded all over the country as it were. It would be very objectionable if he had to forward the contents of an animal from Mayo probably down to Dublin; even if it was forwarded in a tin box it would be a very objectionable thing.

2873. It would have to have a long journey by road first, and then a long journey by train afterwards?—I must say I would not agree to make a *post-mortem* of these contents which probably had been a week on the road. It is objectionable enough when they have been only a day or two dead.

2874. (*Professor Brown.*) We have cases where they dug them up after two or three months?—We have that to do. I almost think they are sweeter then than they would be if they had been in a box. Earth seems to do something towards keeping down odour.

2875. (*Sir W. Kaye.*) You said something about regulations affecting railways and steamboats, and that you thought they were sufficient if rigidly and properly carried out?—I do think so.

2876. Is it not the fact that both the steamboat companies and the railways afford us every facility and do everything in their power to help us in the matter?—I think they do. We do not have many complaints at any rate from the travelling inspectors, and they would certainly complain to the department. It is part of their duty to report where the law is not carried out.

2877. As regards the question of licensing piggeries, you seemed to be under the impression that it was a thing that could not be done practically throughout the country?—I do not think it could, not in Ireland.

2878. Many of those pigs are kept in small cottager's houses, great distances from railways?—Yes, some of them are.

2879. And some of them a great distance from any railway?—Yes, some are 40 or 50 miles from a railway.

2880. With reference to the pig population in Ireland in 1892, you have got the numbers there, will you please state them?—The number of swine in Ireland, as reported by the agricultural statistics issued by the Registrar-General, was, in 1892, 1,115,888.

2881. What were the exports, distinguishing fat and store swine?—The exports in 1892 were 457,977 fat swine, and 42,974 stores, making a total of 500,951.

2882. I believe there is some decrease in the number of pigs in Ireland as compared with the number in former years?—Yes; for instance, in 1890 there was 1,570,366; then in 1891 there was a decrease from 1,570,366 to 1,367,000. Then when we come to 1892, there are 1,115,888, so that the decrease seems to have been pretty steady.

2883. Has there been a proportionate decrease in the disease?—In 1890 we had 365 outbreaks reported; in 1891, 278, and in 1892, 227.

2884. Have you got the outbreaks there reported in the provinces?—I have here a return showing the number of outbreaks of swine fever in the provinces of Ireland during the years 1883 to 1892.

2885. Take 1892?—In 1892 we had in Ulster ten outbreaks, in Munster 56 outbreaks, in Leinster 102 outbreaks, and in Connaught 59 outbreaks. Those are reported outbreaks.

2886. Are you able to account for the greater proportion being in Leinster?—Yes, because the movement of swine is very largely towards Leinster for export purposes. Then again in the case of Munster, which is next to it in numbers, the large movement there is for slaughter purposes. We have Cork and Limerick in that province, Limerick particularly being the largest of the pig slaughtering places in Ireland, consequently the movement of swine to that centre must be something extremely large. Waterford also receives a very large proportion of them for export and slaughter.

2887. In dealing with this disease I think you are of opinion that the restrictions upon the movement of swine would not be necessarily so large as in the case of other animals?—I omitted to state that as fully as I proposed. In declaring infected places, and in declaring areas, I should only propose to do that under extreme circumstances, such as if the disease was not reported, if we had reason to suspect the disease was not reported in, say, a village or a province, or a district immediately surrounding the outbreak; or if a number of outbreaks took place within a small area. Swine are not animals which wander about very much, even when they have not got a swine-house to be retained in.

2888. (*Mr. Wardlaw Ramsay.*) I think I understood from you that there was an endeavour on the part of the Privy Council in Ireland to co-operate in every way possible with the Board of Agriculture?—Yes.

2889. I think you said that it was very seldom that the Board of Agriculture issued an Order that the Privy Council did not endeavour to conform to?—Yes, as part of the conditions of their work.

2890. Then you think that local conditions must be taken into consideration?—Yes.

2891. In issuing an Order, or in endeavouring to conform to the action of the Board of Agriculture, local conditions are of importance?—Yes.

2892. With regard to the restrictions, you have just partly answered the question I was going to put to you: you consider modified restrictions are necessary, but I think you said only in places where disease was known to be not reported?—"Believed"; I should hardly say "known."

2893. You think that where there was a regular system of notification of disease then it would not be necessary?—Not to the same extent. You would require that it should be dealt with.

2894. You are speaking more in reference to areas than in reference to places?—I was referring to areas in answering Sir William Kaye's last question, because in declaring areas you must deal with fairs and markets, and in dealing with those I am inclined to think that if you interfere with fairs and markets you will often frustrate the action of the law, because people will not report cases if they have their trade interfered with.

2895. In cases where it might be thought that it was necessary to declare an infected area, what would guide you as to the size that that area should be?—The conditions of the neighbourhood. For instance, we take a village where swine are not kept in any particular houses; then if that is the case it might be necessary to declare the whole village or townland in which that village is situated.

2896. Declare it to be an infected area?—Declare it to be an area. The man's property on which the animal was kept should be declared an infected place in the first instance.

2897. But practically it would be only for a short distance round the infected place or group of infected places?—That might be so. It might happen to be that it would occupy, generally, from two to probably 500 acres. It depends very much upon the straggling condition of the village and of the townland it is situated in, and so on.

2898. Do you conceive that it would ever be necessary to impose restrictions upon an entire county?—No. I do not think we have any outbreaks in Ireland so large or any other reason to suspect there is a possibility of that.

2899. Could you conceive such a condition of matters that it would be necessary to enclose so much?—No, I do not think such a condition of things would be likely to arise in Ireland from what I know of it, but if such a thing did occur that the outbreak became very extensive, and it was found necessary to do that, it would be almost ruinous to many of the people in the county, because it would simply mean ruin to those who were in many cases dependent upon the pig to pay the rent, to use a very popular phrase.

2900. If it became necessary to consider the advisability of putting an entire county under restrictions, do you consider that the shape would influence such a decision or the extent of it. For instance, I mean in a case where a county throws a tongue of land, as it were, into an adjoining county which is not under restrictions?—We will take the county of Lancaster. You have a portion which extends right away north close to Westmorland, and you have another portion which is large and round about Liverpool. If your outbreak took place in Liverpool, your question would be, would the northern portion of Lancashire require to be dealt with.

2901. Quite so?—If I was advising the Irish Privy Council for a similar county in Ireland, unless I had reason to believe that the disease existed there, or that

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the trade was in that direction, I would not recommend that such a step should be taken.

2902. Therefore, such land as protruded into another and unaffected county, you would rather put that with the unaffected area?—Yes; we should deal with a case like that in Ireland by declaring certain townlands.

2903. Therefore it comes back to my original question, that the shape of the county would influence the decision as to what an infected area was to be?—I think so.

2904. Then, with reference to this system of local inspectors, you have given one reason why you think them advisable, namely, the length of time that the viscera would be on the road, and the very objectionable operation of inspecting them afterwards. May I ask, is there any other reason why you think that the appointment of those local inspectors would be better than sending the viscera to head quarters?—If we take into consideration what I originally said, that until we have better experience we should look upon all things as connected with swine as being liable to convey infection. Then, unless we have properly constructed boxes it might be considered by some authorities—and that would give us considerable trouble—that the conveyance of such intestines would be likely to spread the disease. I do not see any other reasons.

2905. Not for economical reasons; there would be no saving of expense?—Certainly there would, but in dealing with such a large matter as this a detail of expense like that is hardly worth considering, because it would not mean, in any case, more than half-a-sovereign, I presume, to send them in.

2906. I understand the principal reason is the one you gave. There seems to be a very small number of outbreaks in Ulster as compared with the other provinces. Is that likely to be due to notification, do you think?—No; I think that that is probably due to the fact that the number of swine in Ulster is very much less.

Adjourned for a short time.

2907. (*Mr. Stephenson.*) I take it that both as travelling inspector and as chief of the Privy Council Department in Dublin, you have seen a good deal of swine fever?—I will hardly say that I have seen a good deal of swine fever, but I have seen swine fever frequently. In my capacity as chief inspector and professional adviser, I am not now out so much as I used to be, but as travelling inspector I made enquiries into swine fever, and saw many cases then.

2908. And you are familiar with the ordinary symptoms and *post-mortem* lesions of it?—Yes. I am familiar with the symptoms which have been recognised by the term of swine fever, hog cholera, and so on; that is, the several diseases which really are classed under that term.

2909. Now, with reference to this circular, which you issued in July, 1892, No. 2,474, may I take it that it was issued with your sanction?—I saw it before it was issued.

2910. And you sanctioned it?—I did, certainly.

2911. Are the symptoms named in that circular the symptoms that you find in swine fever in Ireland?—I do not say swine fever alone.

2912. How many other diseases are there covered here?—You must be aware that there are symptoms mentioned there which are found in some gastric derangements; for instance, discoloration of the skin is present in gastric derangements among swine.

2913. (*Sir Jacob Wilson.*) Did you use the word "classified" under the term of swine fever?—Yes, I think I did. When that circular was issued, it was issued with the intention of publishing it and inciting people to report cases which might be suspected as cases of swine fever, so that everything that could possibly be brought under the notice of the inspector might be, so that it was for him to discriminate between swine fever and any other disease.

2914. (*Mr. Stephenson.*) Will you kindly tell me what effect these circulars had?—The effect of that circular was that we had more cases reported.

2915. Were they real cases of swine fever?—A great many of the cases were not swine fever, and could not possibly have been swine fever. We had cases of gastric derangement which I have mentioned, and sometimes cases in which worms were found in the fæces of the swine afterwards. We have also had cases of animals which had received injuries, and where there was a discoloration of the skin, which were declared to be ill of swine fever by the owners. I am sorry to say that there was, perhaps, not sufficient care taken even to ascertain whether they were cases of swine fever or not, and where there was no compensation paid it was a matter of little concern to the local authorities really whether it was swine fever or not.

2916. Do you really mean that it was of little consequence whether swine fever existed in a district or not, seeing what large exporters of pigs you are?—No, I do not say that; that is another question altogether. What I say is this, or rather what I wish you to understand is this, that the chief object of the administrative authority, that is, the local authority, is to administer the rates and to keep down the rates. They consider the burden on the rates; if there was no compensation to be paid for swine which were diseased, or which were in contact, it did not matter to them anything like as much as if compensation had to be paid.

2917. Then may I take it that in Ireland it is more important to keep the rates down than to have a clean bill of health?—No, to the central authority it is not.

2918. I am talking about the Boards of Guardians?—In the minds of the Boards of Guardians it is more necessary to keep down the rates than it is to keep down the number of cases of disease.

2919. Notwithstanding the great export trade that you have?—I do not look upon our swine trade as a great export trade.

2920. But one half of the 1,115,888 pigs come to England every year. Do you not think that a very large export trade. You said that the pig population of 1892 was 1,115,888?—Yes, it was.

2921. And the half of these pigs come to England?—For slaughter; but there are only 42,000 of them for store purposes.

2922. Do you not think that a very large export trade?—It is as an aggregate.

2923. Do you not think it is worth a great deal more attention than you appear to give it?—No; not more than the central authorities appear to give it. The local authorities, not the central authority, do not give it as much attention as we would desire they should do, otherwise it would have been unnecessary for us to issue this paper "The Symptoms," and a circular also to the unions asking them to publish it.

2924. It stands this way; that you say the local authorities of Ireland are more anxious to keep down the rates than to show a clean bill of health so far as their swine are concerned?—Certainly; I believe that to be correct.

2925. We will take this paper No. 2474. You say amongst the first things, "the animal often falling "down and quickly dying without the least premoni-"tory symptoms or even suspicion of its being ill." Do you think that would arise in swine fever?—I believe, as a matter of fact, that occurs in swine erysipelas.

2926. I am speaking about swine fever just now?—No, I do not think it does.

2927. Then you say, "Sometimes the affected pig "drops dead while feeding"; do you think that

occurs in swine fever without premonitory symptoms ?—No, I have not seen that.

2928. Then you say, "In many cases the eyes "become wild and projecting, their margins of a dark "red colour"; do you find that in swine fever ?—No, I do not say that I have found it.

2929. Are they not rather quite the opposite; closed and gummed up ?—Yes.

2930. Then you would say "No" to that ?—I would say "No" to that. I think that what was copied there were the appearances of anthrax.

2931. Then, "The mouth partly open, reddish "inside, and generally frothy." Is that a distinctive character of swine fever ?—No; I think all that is within the same sentence.

2932. Is that a distinctive symptom ?—No, I do not think that it is.

2933. "The skin becomes of a livid or reddish "colour"; is that a diagnostic symptom of swine fever ?—No, it is not of swine fever.

2934. Is it not a symptom that is found in a great many diseases ?—It is certainly.

2935. And is it not one of the commonest symptoms that you find in a pig ?—When out of health.

2936. It does not matter what he is suffering from ?—That is so.

2937. Therefore, you would not swear to that ?—I would not.

2938. Now, going down to the bottom, you say, "There is a lowering of the general temperature" ?—Yes.

2939. Is that so ?—Not in the fevered condition.

2940. In what condition would you find such lowering ?—The lowering is after the fever is over, and the animal is nearly collapsing. The temperature decreases then.

2941. What is your experience of the temperature in swine fever ?—I have known it to run up to about 104 degrees.

2942. Not higher ?—105 would be the highest that I recollect at the present moment.

2943. If anyone told you that they had seen the temperature at 108, 109, or 110, what would you say; would that be swine fever ?—I would not deny it.

2944. You have never seen anything like that ?—It has not been within my experience.

2945. Then in the last sentence but one you say, "The animal dies in from 24 to 48 hours"; is that usual in swine fever ?—It is not usual in swine fever.

2946. That is not so then ?—No.

2947. Is it not a fact that they live for two or three weeks ?—Yes.

2948. Or even a month or five weeks ?—Yes, they do.

2949. Then I may say "No" to that ?—Yes.

2950. Then do not you think that the whole of this circular is exceedingly misleading ?—No, not for the purpose for which it was issued.

2951. But it is issued with the authority of your department, and with the Government stamp to it; do not you think it would be very much better to have given more correct symptoms and educated the people better ?—I have already said what the intention of this was; I think that the circular serves its purpose.

2952. Now, will you tell me the ordinary symptoms of swine fever, if you please; but first, it has been suggested that I should have asked you, would this circular have had the same effect if it had been to cover the diseases of swine, not specially swine fever, because this evidently covers a great many diseases ?—Yes, it does.

2953. Would that have been better ?—No, I do not think that we could legally have asked them to report all cases of diseases of swine.

2954. Then we will say no more about symptoms. Have you made many *post-mortems* ?—Yes, I have made some *post-mortems*.

2955. Will you tell me what are the usual *post-mortem* lesions in swine fever ?—The lesions are found in the lungs and in the bowels. Take the symptoms which are presented in the intestines, they may be of a general diptheritic condition; that would be in an acute case. In the more chronic cases we find that that becomes centred in localised spots, and we have nodules and ulcers. So far as I know, the spleen is not affected and the lungs are affected with a catarrhal form of pneumonia.

2956. Is there any consolidation of the lung ?—No, I think not.

2957. No consolidation ?—Not that I remember.

2958. Is there any effusion in the thorax ?—No, I have not noticed it.

2959. Have you noticed effusion into the peritoneal cavity ?—No, not in swine fever.

2960. Have you noticed enlargement of the mesenteric glands ?—No, I have not. In fact, my attention has been chiefly directed to the mucous membrane of the bowels.

2961. Do you think a pig might die of swine fever without showing any of the usual bowel lesions, or lung lesions ?—I think hardly.

2962. Hardly ?—That is so.

2963. Is it possible then in some cases that the lungs alone are affected ?—Yes, I believe it is so.

2964. Is it equally possible for only the bowels to be affected ?—Yes.

2965. What is your idea of the percentage of deaths in an outbreak if the animals were left to themselves ?—I should think about 35.

2966. That would be the percentage of deaths ?—Yes.

2967. So that there would be 65 recoveries ?—I think so. I must say that in stating that, it is without any statistics before me. I have not looked at it from that point of view and I do not collect any statistics.

2968. I take it that you have never treated any cases ?—No, I have not treated any cases.

2969. But that is your idea, that about 35 per cent. of deaths occur ?—I think it is probably 35 per cent.

2970. Do you think it wise that this disease should be treated medicinally ?—I do not believe in treating diseases of this description.

2971. Why ?—My idea is, to get rid of the disease, not to keep the animal about the place.

2972. But why do you object to treatment ?—Because as long as the pig is alive I look upon it as a centre of disease.

2973. It is a highly infectious disease, is it not ?—Yes, and it is desirable to get rid of all these centres.

2974. In all your experience in Ireland have you come across any case of endocarditis ?—I have seen it, and that I believe is the form which is now referred to by Professor McFadyean as swine erysipelas.

2975. Have you seen *post-mortems* of those ?—I have, but I must admit that I never looked upon them as cases of swine erysipelas as distinct from swine fever.

2976. You looked upon it as part and parcel of the whole ?—I did. I looked upon it at that time so, until I saw that it had been deferentiated as swine erysipelas. I believe you referred to a case of that yourself.

2977. Now, about suspected outbreaks of disease; have you many of those ?—We have.

2978. What is the percentage of real outbreaks compared with the percentage of suspected outbreaks Have you as many of one as of the other ?—I think we have more suspected outbreaks of disease reported in unions where the compensation is paid than in any other unions, but I believe that is with an object.

2979. You say that your objection to sending organs for *post-mortems* up to Dublin was because they would

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be very offensive when they get to you?—Partly so.

2980. What other reason have you; what other objection have you to that being done?—I mentioned also that, as I have previously stated, it was desirable to look upon everything about an infected swine as liable to spread the disease, therefore that objection might be raised to the conveyance of the organs.

2981. If the viscera was sent up in a jar or in a tin?—In a sealed vessel.

2982. It would be no better then, would it?—I should not think so.

2983. Then you also said that until we have better information we should look upon all *post-mortem* viscera as infectious?—Yes.

2984. That is, it does not matter what the animals die from you would treat them as suspicious?—No, I think I said that all swine fever cases, anything that had been.

2985. I put it down that you said "till we have "better information we should look upon all *post-* "*mortem* viscera as infectious?—No, excuse me.

2986. I assure you I was very particular about the word "infectious"?—Quite so. But excuse me. I think what I said was that with reference to the sources of infection until we are better experienced all things used about swine—I am referring to where an outbreak of disease occurred—should be looked upon as a source of infection. I also afterwards referred to the unsanitary state of the premises, and the chairman kindly referred to the non-isolation of swine, all under the head of probable sources of infection.

2987. Very good; that is your answer?—I think that is what I intended to say.

2988. Now referring to your portal inspection in Ireland; are many diseased animals detected by your portal inspection?—No. Do you refer to swine or do you refer to all animals?

2989. I am taking swine alone just now?—No, they are not.

2990. As a matter of fact are there any detained?—There have been some, but not recently.

2991. How recently?—I do not think there has been anything within the last 18 months.

2992. Referring to what you said about areas; I am sorry to say that I understood that you would make an area as a punishment for some authority that was not doing its duty; that is, where they had not given proper notice you would then make an area there as a punishment for them, not as a preventive of disease?—I do not think that I intended any such thing.

2993. What did you intend in speaking about areas; you said if you found any of the local authorities had not given proper notice you would there have an area declared?—No. What I said was that if there was reason to suspect owners had not reported cases of disease, or if there was a frequency of reports from a district, in either of those two instances I would consider it was judicious to declare an infected area, but I did not intend the interpretation to be put upon it that that should be a punishment. My intention was that its being an area was to interfere with the movement of swine into and out of those places so that the area of infection might not be extended.

2994. With your explanation that will do. In declaring the limits of an area how would you define your limits of an area? In answer to one question. you said that it would not be required to close an entire county in Ireland?—No, it would not.

2995. But would it not be very important to define very clearly the limits of the area so that everyone in the district could understand exactly what the limit was?—Decidedly so, and I believe myself that townlands in Ireland and electoral divisions and parishes are the best known divisions of landed property in the county.

2996. Regardless of their shape, whether they are round, square, oblong, or star-like, or anything else you would take those divisions?—I think so, because we have got three divisions there to select from. If we found that the form, the contour, of either an electoral division, or a parish, or of a county, was such as to operate too hardly on account of the prolonged tongue referred to by my late questioner, then we should select the other divisions, which would probably meet all the requirements.

2997. Then one more question as to disinfection. What is your idea of the best form of disinfection for swine fever?—I select, myself, the same preparation that we have been using in connection with pleuro-pneumonia, that is Jeyes' fluid. I select it because it is acknowledged to be a powerful germicide.

2998. (*Mr. Shaw.*) Is it a carbolic preparation?—No, it is one of the derivatives from coal, from gas tar. It is not poisonous, it is miscible with water, and it is not injurious to anything that I am aware of, such as woodwork or even human skin, but as I understand it possesses cresote, it would be rather inclined to make woodwork more durable.

2999. (*Mr. Stephenson.*) What else would you do besides washing with Jeyes' fluid?—We would first of all remove everything that it was possible to remove, by scraping and thorough scrubbing. I should deal with that pretty much as I read a moment ago, was done with railway pens, where it was practicable. But there are instances which I think must at once present themselves where it would be a very difficult thing to start to cleanse and disinfect the tenant's cottage where the pig had been allowed to wander about the place.

3000. We will not interfere with that case; we will leave the cottage alone; we will take the ordinary piggeries?—If the ordinary piggeries are built with walls of stone as you find I where there are large institutions, I think that the washing and scrubbing, and scouring, and disinfecting would be sufficient.

3001. With Jeyes' fluid alone?—With that alone.

3002. What about the floor, if it was made of soil or sand?—I would take off as much of the floor as I could possibly take off, and then saturate the remainder.

3003. With Jeyes' fluid?—Yes, with the solution. If I could persuade the men to put a better floor down I should do so.

3004. In Ireland who pays for the disinfection and the cleansing;—That is done by the local authority.

3005. Do they find the disinfectants?—No, I do not say that they use any disinfectants. You asked me what I would do.

3006. But I now want to know who pays for the disinfecting of the premises?—That is paid for in the same way that the inspectors are paid for, partly by the rates.

3007. Do you find the material to disinfect with?—No, the local authority finds the material.

3008. I mean, the owner does not find it?—No.

3009. Do you give the owner any assistance in cleansing his place?—No, the owner must give us assistance in cleansing his place.

3010. Does he assist in it?—He must, according to the order.

3011. Do you think it necessary to burn wooden sties?—Most certainly; there are certain conditions where the total destruction of the premises is indicated.

3012. Absolutely necessary, in fact?—Absolutely indicated.

3013. How long do you keep an infected place closed?—After slaughter has taken place I presume you mean, and all the animals have been killed, and the place cleansed and disinfected.

3014. Yes?—I should think 28 days would be ample for that.

3015. (*Mr. Joseph Smith.*) Then are we to gather that throughout Ireland very little notice is taken of swine fever, and that very little action is taken by the local authorities?—With the exception of the few

that I have mentioned there is not very much action taken.

3016. With the exception of those seven Unions?—There are other Unions which have gone so far as to issue the circular that Mr. Stephenson was good enough to refer to just now, and the circular letter, and to call upon the people to bring all such cases as might come within that circular, under the notice of the inspector. The seven that I referred to are the seven who pay compensation in addition to that.

3017. When you hear of cases or find out cases that are not reported, are the people prosecuted?—Yes, they have been. That would be done by the local authority. I have not got a list of any prosecutions, but I know that prosecutions have taken place.

3018. Do the local authority decide as to whether there shall be a prosecution or not?—Yes, because the expenses of that prosecution would fall upon the rates of the Union.

3019. And you say they are very careful in spending the money?—Yes, I think they are. They take care in the expenditure of their money.

3020. If the onus of raising a prosecution, or taking steps, was on some more central body, would it be more likely to be put into force?—I think so. I think there would be no question of that. There are always local influences which would militate against the carrying out of a prosecution.

3021. You told us that among those pigs which are examined before they are exported, you have very rarely found unhealthy pigs?—That is the case. I think owners would take very great care about presenting an animal for inspection even if there was an animal sick.

3022. Are not these pigs bought up at the fairs and sent on by railway to the ports?—Yes, they are sent to the station for the port of embarkation to be inspected in the various yards of the shipping companies, but I think if there was anything that was of a suspicious character the owner of those swine, or the man in charge, would not run the risk of presenting them for inspection.

3023. Do you think he would have them killed?—He might not. He might take them away and treat them.

3024. As a rule pigs are bought up in the fairs?—Yes.

3025. And delivered on the railway by the sellers?—Yes.

3026. And then?—They are sent on to their agents at the port, and their agents carry out all the various steps which are necessary prior to shipment.

3027. Have you any experience of these store pigs. We see that there are 42,000 store pigs sent away to England. Where are they shipped to, can you tell us?—I cannot tell you offhanded, but I think there is a return which will be submitted to the Commission, showing the ports of Great Britain to which the swine go. I know that a very large proportion of them go to Holyhead, and to Liverpool, and to Bristol.

3028. You do not know in which particular direction the store pigs go—you cannot tell us that?—I think the majority of them go to those three ports of Liverpool, Holyhead, and Bristol. All we know is the port of debarkation.

3029. (*Mr. Carrington Smith.*) Embarkation?—And debarkation.

3030. (*Mr. Joseph Smith.*) What do you take to be store pigs? How do you distinguish store pigs from fat ones?—That is defined by the person who ships them. If he has a mind to call an animal a store pig because it is not in condition ready for the knife, we must take his definition.

3031. Do the store pigs go at a less rate of carriage?—I cannot tell you that.

3032. Do you suppose that any of these store pigs are killed when they get over to England?—My knowledge of what is done does not extend beyond Ireland, but I think it is quite possible that such a thing could be done.

3033. You were talking about the pigs in the houses. Do you consider that living in the houses is an unhealthy condition for the pigs?—I cannot say that it is. I think that the pig that has the pleasure of dividing his residence with his owner has a little more liberty, and a little more fresh air by getting round about the surroundings of the house than if he is penned up in a six feet by four piggery.

3034. Do you consider that a pig which was let out and ran about in the daytime and was shut up at night, would be more likely or less likely to have the disease than one that was enclosed in a sty?—I should prefer to have a pig that was allowed to exercise himself in this way.

3035. (*Mr. Carrington Smith.*) As a matter of fact do rural sanitary authorities ever object to pigs being kept in cottages on the ground of public health?—I have no evidence at hand to show that they do.

3036. You do not know that they do?—I do not know that.

3037. Do you think that food has anything to do with causing any disease which in its outward symptoms is often mistaken for swine fever?—I have known instances where brine has produced gastric derangement with discolouration, and that has been mistaken for swine fever.

3038. It has been suggested by previous witnesses that separated milk sometimes causes organic disturbance which gives outward symptoms which sometimes are mistaken for swine fever?—I cannot say that I have seen any cases of it.

3039. Do you consider that in Ireland you can insist on the cleansing of railway vans or trucks in any specified time after they have been used, or have you only power to insist upon them being cleansed before being used again?—Before they are used again.

3040. Then they can remain in a siding or in a station uncleansed for weeks without the local authority having any power to interfere if they are not re-used?—That is so.

3041. Do you consider that is desirable?—I do not, but it is very difficult to see how you could otherwise alter it.

3042. Would you suggest that there should be an alteration in the Order so that it would be made compulsory on the railway authorities, or upon the owners of the vans to have them cleansed immediately after use?—I think that would be very inconvenient, because the cleansing and disinfection at some of the country stations would be an impossibility. They would therefore have to convey them probably 20 or 30 miles to a water supply; and then in addition to that if you look to the number of hands engaged at a country station you will see that it would not be possible to use them for that purpose. All the railway companies that go to Dublin have got their cleansing stations at Dublin. The cases that you have referred to where they will stand for weeks unused are exceptional. The rolling stock of the railway companies in Ireland, as far as I know, does not admit of idle trucks; they have to run their work pretty close to the use of almost all their trucks, and it is not to their advantage to lay them to one side unless they have cleansed them; but I say it is possible for such a thing to take place.

3043. I think I understood you to recommend that two-thirds of the value of a diseased pig should be paid in compensation instead of the present statutory proportion of one half?—Yes, I think so.

3044. Of course I take your 7*l.* or 8*l.* limit as a limit applicable to both cases?—Quite so. I say that no pig is worth more than 8*l.* That is my first point, and then the value of the pig is according to the fluctuation of prices.

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3045. Am I right in understanding that you suggest that the maximum should be raised from 4*l.* to 7*l.* or 8*l.* ?—Yes.

3046. And that the proportion of the compensation paid in case of diseased pigs should be raised from one half to two-thirds ?—Quite so.

3047. In Ireland do you stop movement of any swine from an affected place immediately after the discovery of the disease ?—Yes; steps are taken by the veterinary inspector; at least the veterinary inspector is authorised to do so—to stop the movement of any swine from the place where the disease has been found off the owner's premises—even he may go further than that.

3048. Would not the owner immediately infringe the law if, after the place was declared an infected place, he allowed any movement of a pig from that place, and would he not be liable to a prosecution ?—Yes, if the place was defined.

3049. *Ipso facto* in the declaration ?—Yes, he would.

3050. Do you know that prosecutions are instituted for such movement in cases of its being after declaration ?—I do not call to mind an instance at the present moment, but I know that prosecutions have taken place for various infringements of the swine plague regulations, but I could not exactly say on what point.

3051. I understood that you strongly recommended the disinfection of the floors and walls of sties, and I think I inferred from you that you would recommend if you had the power that the floors should he made impermeable ?—Yes.

3052. You would recommend that they should be so as a matter of opinion ?—Yes, I would.

3053. Would you recommend that the whole expenses of the disinfection should always be paid for by the local authority, and not by the owner of the place, the occupier of the place ?—It is the duty of the local authority to find the disinfectants at the present time, I think.

3054. You hold that it is ?—I think so.

3055. There seems to be a difference of opinion on that. The question I was going to put is whether there would be any difference between the English and the Irish Order as respects disinfection ?—The Irish Order says, "A local authority shall cause the "pigsty, shed, or other place in which a pig affected "with swine fever has been kept while so affected, or "has died, or been slaughtered, to be, as far as "practicable, cleansed and disinfected, and all litter, "dung, or other thing that has been in contact with "or used about any such pig to be disinfected, burnt, or "destroyed."

3056. At whose expense, you have not said yet ?—If they cause it to be done I do not think they would cause the owner to purchase the material. I think they would have to purchase the material, and call upon the owner to assist in this work. That would be my reading of that. I think that a similar paragraph to that is in the Order relating to pleuro-pneumonia, and we have had to do it.

3057. Then your interpretation of the existing Order with respect to Ireland is that the local authority shall always pay ?—It is the duty of the local authority to pay.

3058. Not only to cause it to be done, but to pay for it after having so caused it ?—That is my reading of it.

3059. (*Mr. Shaw.*) I think you were asked some question about the possibility of disinfecting the creels ?—Yes.

3060. Those are the little carts which the country people bring their pigs in ?—Yes.

3061. Surely under any condition it would be hardly possible to disinfect all the creels in a fair ?—That is so.

3062. There may often be 100 or 150 creels in a fair, perhaps more ?—Or even more than that, creels and donkey carts, and other things which are used for the conveyance of the owners' swine.

3063. I want to make the committee clear on this point—they are not dealers' carts, they are simply small farmers' carts ?—Those are the farmers' carts, the carts which are used for conveying their own swine into market to be offered for sale.

3064. If there were dealers' carts, which there would be in some parts of Ireland, though not in the south that I am aware of, you would be in favour of disinfecting those, as well as of registering the dealers ?—Yes, I would.

3065. There is a small trade done, I believe, between parts of the County Limerick and County Cork. Some small dealers go down to Fermoy and buy store pigs there, and bring them up to Limerick. Would you be for disinfecting that style of man's cart ?—I would, certainly.

3066. They are not exactly dealers; they are a sort of hybrid between a dealer and a farmer ?—Yes, quite so. I perfectly understand the class of cart referred to.

3067. You were travelling inspector at the time the foot-and-mouth was in Ireland among pigs, and among other animals ?—Yes.

3068. Did you find any difficulty in stamping that out; it was very effectively done ?—We had some difficulty; certainly; there is difficulty in doing all these things.

3069. The fact of that being stamped out so effectually, and so rapidly, would lead you to hope that swine fever might be stamped out in the same way ?—I think so.

3070. You stopped fairs on that occasion, and adopted several other means ?—Yes, but then cattle were implicated in connection with that disease.

3071. You mentioned about the pigs offered for shipment being comparatively sound, and that there are very few cases of swine fever reported amongst them ?—Yes.

3072. Might that not be owing to the fact that the farmers do not offer the diseased pigs in the fairs, because they know that those pigs would not be bought ?—Quite so.

3073. No dealing man, knowingly, would buy a diseased pig ?—Or an animal that looked anything out of order; it does not matter whether it has swine fever or anything else.

3074. Quite so; therefore, because the cases do not appear at the ports is no proof that there is no swine fever in Ireland ?—No; I should not think that anyone would think that it was a proof.

3075. I wanted to get it the other way, that they could not say, because there was swine fever in Ireland, we did not catch it at the ports, because we were incapable of catching it, and so on ?—I believe that a man who had an animal which he suspected to be sick, would not take it to a fair.

3076. Quite so, and that is my opinion. You have inspectors in most of the large fairs in the country, have you not ?—No.

3077. I thought you had ?—No, just the local authority.

3078. You mentioned Newcastle West, County Limerick; is it not rather singular that this Union is conspicuous by the fact that it is continuing to report itself as having swine fever; can you account for that ?—It is singular in this—because it and six others all do the same thing.

3079. How comes it, in your opinion, that Newcastle—I cite that one case in particular—reports swine fever so regularly ?—Because they get compensation.

3080. In other words, it is one of the Unions that compensates and slaughters the pigs reported ?—Yes.

3081. Do you not think that in the matter of cattle diseases generally the Unions have really got too much other work to do to enable them to deal with this matter ?—I quite agree with you. I think that their work has been very materially increasing of late years.

3082. They have laid burden after burden upon the boards of guardians ?—Yes.

3083. Until there is a perfect congestion of work ? —Yes.

3084. That is my own experience as a guardian. Now, as to the disinfection of railway waggons, do you think this is done in a satisfactory way ?—I do not say that it is entirely satisfactory, but I say as far as it is practicable it is.

3085. I suppose it is satisfactory from the inspector's point of view, but do you think it is satisfactory from the dealer's point of view ?—The dealer objects very strongly to the use of lime-wash, because he says that his swine are injured by it.

3086. Do you think the dealers object so much to the use of the lime-wash as they do to the use of quicklime ?—Well, the lime-wash is really a solution of quicklime. No, I think one of their objections is is pretty much the same as was referred to just now —that the cleansing was done immediately before the time that the trucks were used, then the lime which is freshly slaked burns the pigs as a result. If that cleasing and disinfection was always done immediately after the unloading, the burning effects of the lime would pass off. Many of the companies know that fact, and they prefer to cleause as soon as unloaded. I know cases where the trucks are taken a long distance to the nearest cleansing station, and they carry on the cleansing immediately after the trucks have been unloaded.

3087. It was alleged by a witness here that very serious damage was done to the pigs which are put into waggons in which the lime had not been properly slaked, and then the urine of the pigs at once made the lime so that it burnt the skin of the pig ?—During the whole of my experience of ten years as a travelling inspector I never saw a case of that description take place, but I have known where the cleansing has taken place immediately before the swine have been put into the trucks, and I have afterwards seen the swine at the slaughtering establishments certainly burnt. But I hold that if the disinfection had been carried on as it should have been, and as I think it would be a reasonable way of interpreting the order, that as soon as possible after the use of the waggon such burning would not be likely to take place.

3088. Then practically your opinion is that a dealer can recover from a railway company for improper disinfection ?—I do not offer that opinion at all ; that is a legal opinion.

3089. Supposing that you enter a man's premises, or your inspector enters a man's premises, and finds that the sanitary condition of the place is very bad, the wood-work all semi-rotten, and so on, and he proceeds to destroy that wood-work, are you prepared to recommend compensation to that man from the public funds ?—I think that you would be obliged to do that. If you destroy a man's property the very fact of offering him compensation for the property you are taking away from him—for the pig in contact—establishes the fact that you must pay compensation for anything else that you do.

3090. As a matter of fact, in the law as it stands, there is no provision for such compensation ?—No, I do not think any step has been taken so wide as to destroy a man's premises as well as take his pigs.

3091. (*Sir Jacob Wilson.*) I gather from you that the attention of the local authority is from time to time directed by the Irish Privy Council to matters connected with diseases of animals throughout Ireland ? —That is the case.

3092. And such was the case during the year 1892, and also during the previous year ?—Yes, I believe there were several circular letters, the date of which I do not remember.

3093. With reference to swine fever ?—Yes.

3094. Have you any reason for knowing that after the circulation of the swine fever circular in 1892, there was an increase in the number of local authorities which adopted compensation, and more rigorous measures of administration ?—No, I think that the number of Poor Law Unions or local authorities remains the same, that is seven. I think those seven commenced under the Order of 1885 when it was issued, and that they have continued ever since, and that there has not been any increase. Our condition is the same as in 1885, comparatively speaking.

3095. And therefore the circular letter of 1892 appears to have been treated by them as a dead letter ? —Not entirely. So far as compensation is concerned it is a dead letter, but so far as printing and circulating the description of the symptoms laid down in the paper, I know that cases have occurred where they have taken those steps.

3096. You defined certain precautionary measures which are adopted at the port of embarkation and also at the railway stations, I think, by inspection ?—The inspection at the railway stations is done by the travelling inspector, but the inspection that takes place at the ports is done by gentlemen known as portal inspectors. They are qualified veterinary surgeons. The inspection at the railway station is not necessarily done by a qualified veterinary surgeon.

3097. Is there any inspection by qualified officers in the case of markets throughout Ireland ?—Not very often. That would be the duty of the inspector of the local authority if he was authorised to do so, but it does not always follow that the method by which he is paid would seem to include that in his duty. He is very often paid by the case he visits, and not by the annual payment and certain duties set aside to him.

3098. Do you consider that an examination of markets would be a very proper precaution ?—I think it would. I think it is desirable that there should be an inspection of swine, particularly in districts where swine fever is known to exist.

3099. Assuming that the system of administration of swine fever in Ireland were to continue as it is at present, would you recommend any different system of payment by the local authorities to their inspectors ? —If it was taken over by the central board the payment would be from the central board.

3100. I put the other hypothesis—if the system of administration remain as at present ?—It would be desirable.

3101. Do you consider that the means adopted at the port of embarkation in Ireland are ample for the protection of England from contamination by swine fever from Ireland ?—I do not think they could be more so.

3102. Is there any more disease in Ireland at present than there was formerly ?—No, there is a decrease in the number of reported outbreaks.

3103. May I ask up to what date you have returns to show this ?—To the end of 1892.

3104. My question referred more to the year 1893 ? —I have not any statistics with reference to the year 1893. My statistics terminate with the year 1892.

3105. (*Sir W. Kaye.*) I think you have made a mistake in referring to the number of unions which have paid compensation, you stated seven, but as a matter of fact there have been more ?—Yes, there have been seven unions which have always paid compensation, but a greater number have paid at times. I misunderstood the question. It is distinctly shown by the statistics which will be submitted that in 1886 16 unions paid some compensation ; in 1887 11 ; in 1888, 12 ; in 1889, 10 ; in 1890, 15 ; in 1891, 10 ; and in 1892, 11.

3106. I gather that you consider the extent or area of an infected place must be determined by a knowledge of local circumstances ?—Quite so.

3107. Do you think that will be better done by the local authority themselves, or by a government inspector, without any possible prejudices, sent down in the case

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of an outbreak to make the necessary inquiries into all the circumstances ?—I think the latter would be the proper way, there can be no doubt about that.

3108. Among the precautionary measures which you recommend it us, you say that one would be the division of Ireland into districts ?—Yes, Ireland is divided into districts at present, but I mean, presuming that the Crown was taking it over.

3109. On the assumption that the present functions exercised by the local authorities were to some extent handed over to the central authority, especially for the purposes of slaughter and the payment of compensation, would you recommend the division of Ireland into special districts for that purpose ?—Yes.

3110. Can you indicate to the committee the basis upon which that division should take place ?—Yes, I would divide it in the first placeinto four provinces and put a district inspector over each province. It does not follow that it would be necessary that that district inspector should be a veterinary surgeon—he might be a layman ; but in either case, as he would have so many other things to do with reference to the payment of compensation and the valuation papers, he would have a good deal of clerical administrative work to do —I would leave with him a veterinary surgeon who could do all duty connected with the professional portion of the work, and who could supervise under the district officer.

3111. Then do I gather that the whole administration in your opinion would be done direct from Dublin in that case ?—Certainly. The four district officers would then be amenable to the instructions of the central office.

3112. Have you ever adopted a similar system for the extermination of any other disease in Ireland ?—No, we have not.

3113. Do you see any greater difficulty in getting rid of swine fever as compared with any other disease ?—The reason why we did not find it necessary to adopt such a measure in pleuro-pneumonia, for instance, was because the chief outbreak of disease was centred immediately around the residence, as it were, of the central authority (that was Dublin), and its immediate vicinity, therefore all that was under our immediate control. Any outbreaks that took place were not far off, and we could send from the central authority to those places.

3114. In the event of pleuro-pneumonia having been more generally distributed over Ireland, you would have been disposed to allow a similar system of subdivision ?—I think it would have been necessary.

3115. To what do you attribute the decrease in the number of pigs in Ireland ?—I can hardly say positively what it is due to. There are so many circumstances that might be considered as contributing to it.

3116. Do you consider there are causes other than that of swine fever ?—Yes, certainly.

3117. You have given as a reason why the disease is not frequently discovered at the ports that a man would not take a sick pig to a fair. That was, I think, partly what you said ?—Yes, that was one reason.

3118. Now, might it not be open to that man on his having an outbreak of swine fever to leave his diseased pig at home, but to take pigs in contact to the fair and not be detected ?—It is quite possible to do that.

3119. And, therefore, pigs might even, after a careful inspection at the port, be passed although they had been in direct contact with diseased pigs ?—Yes, that is possible.

3120. (*Professor Brown.*) Taking your last answer, does it not imply that inspection at the ports, as a rule, is of very little value ?—I think it does rather imply that.

3121. Do you happen to recollect any number of instances in which the diseased animals have been detected on the landing-places ?—The number is not very large.

3122. Can you give the committee any idea of the number, say, of swine fever, for example ?—It must be a small number, but I would prefer not to mention a figure.

3123. Do you remember any one case ?—At Dublin, I think, a case has occurred.

3124. Do you remember any more than that one ? —No, I do not call anything to mind. Any case would be in the returns, but I cannot call to mind anything.

3125. Do you recollect whether on that occasion the rest of the pigs were sent to England ?—I cannot say positively, but it is probable they were.

3126. Since then the Amendment Order was passed which gives the inspector powers to detain any number of pigs which are found in contact with diseased ones ?—Yes, there is such an order.

3127. Do you think there would be any great difficulty in getting rid of swine fever from Ireland ?—I have no doubt but what we could get rid of swine fever, but there would be some difficulty certainly.

3128. I mean a special difficulty, greater than in reference to pleuro-pneumonia ?—No, I do not think so.

3129. Excepting so far as regards the extent of the disease ?—Yes, but I do not think that all the cases that are reported as swine fever are cases of swine fever.

3130. So that altogether, from your knowledge of the subject, you do not apprehend that the measures, if they were properly carried out, would be likely to fail in getting rid of the disease ?—I hardly think so, with the alterations which I have suggested.

3131. In reference to disinfection, is there anything which you think would displace lime satisfactorily ?—Do you refer to the disinfection of railway trucks ?

3132. Anything ; ships and everything else ?—Lime is not used in the disinfection of premises for pleuro-pneumonia ; we have not used lime there at all. We have relied entirely on washing, and then afterwards on the use of Jeyes' fluid ; we have used some thousands of gallons of that disinfectant.

3133. In those cases the disinfection has been done under the superintendence of your own immediate officer ?—Certainly.

3134. Speaking generally, do you think it is possible to get rid of lime, and to use something else instead of it ?—I think it might be done.

3135. Do you see any great advantage, any special advantage, in using lime ?—There is only one advantage, and that is that it shows whether the truck has been cleansed or not.

3136. Dealing with a large extent of country, is not that rather a considerable advantage ?—Yes, if a truck is properly washed, and all excrement is removed from it, I think it is in just as good a condition for the carriage of swine as it would be if a solution of lime-wash, a solution which is not defined as to quantity, was put on a truck. It is quite possible, so far as I understand the order at present, for a man to put a teaspoonful of slack lime into 100 gallons of water, and that would be a solution of lime, and he would comply with the law.

3137. Do you know what the result of that would be, when the travelling inspector failed to find any marks of lime-wash on the truck or pen ; what do you think would happen ?—He would not be able to report that he found that the place was cleansed and disinfected.

3138. Do you think it probable that the railway company would be summoned for not disinfecting the pens or trucks according to the order ?—Yes, at present ; I thought this was, if any other step had been adopted, to do away with lime.

3139. I am talking about the advantage of the use

of lime. Is it not the case, that the chief reason for continuing to use that agent is, that the fact of the place being covered with lime-washing indicates that something has been done in the way of cleansing the place, and disinfecting it ?—Yes, I quite admit that, but I admit also that as the Order is at present framed a teaspoonful of lime——

3140. Do not say anything about the teaspoonful, because that would be nonsense. It would be too much trouble to do it, and there would be nothing gained. Is it your opinion that other agents, other methods, would be equally effective, if any means could be devised of making it apparent that disinfection had been done ?—Quite so.

3141. With reference to the cases where swine have been burnt with lime, and in this country we have had some very serious cases of limbs being burnt to the bone, do you consider that would be likely to happen from an application of limewash as it is understood by the builder or plasterer ?—No, I do not.

3142. Do you think that a system of throwing lumps of lime on the body of a truck, and then throwing a bucket of water over them, and sweeping the thing roughly about the floor would be likely to result in injury to that extent ?—I think it very likely.

3143. But if the disinfection is properly done, there is not the slightest probability of injury arising from lime ?—I do not think so.

3144. (*Sir W. Kaye.*) Have steps already been taken to provide the Board with information which would enable any new course of action that were adopted to be carried out promptly ?—Yes, at the present time I have two travelling inspectors engaged in Ireland, one taking the north, and the other taking the south, and their whole time is employed in inquiring into swine fever, as to its origin, its extent, and the unions which are being affected, and as to whether the regulations are being carried out, and the course of trade in those particular districts. *Mr. Matthew Hedley.* 10 March 1893.

3145. Have the reports which have been furnished up to the present been satisfactory from that point of view ?—As far as that goes they have given us a large amount of information, but it tends very largely to show that the local authorities are not doing a great deal.

3146. (*Mr. Shaw.*) I omitted to ask this question with regard to store pigs going across the Channel; you said that you did not know exactly what age those store pigs would be. They were described as "store pigs" by the dealer, is that so ?—Yes.

3147. Is it not possible that these are small pigs for the small pork trade for Bristol, Milford, and other places, and are sold there ?—It is not only possible, it is very probable.

3148. You do not think that many pigs go over to England for the purpose of being fed into bacon pigs ?—I hardly think so.

3149. Do you think that many pigs come over from England to be fed in Ireland ?—No.

3150. I am aware that many pigs come over for stud purposes ?—We do not allow anything in at all. There is no importation into Ireland takes place without the papers being referred to the Adviser of the Department, and if it is found that it is an animal being sent over for any other purpose but for breeding, the thing is refused at once.

3151. (*Mr. Wardlaw Ramsay.*) Is that protective ?—Yes, that is protective. We do not allow anything into Ireland for other than breeding purposes at present.

3152. (*Mr. Stephenson.*) And not always even for those purposes, I think ?—Yes, we do.

The Witness withdrew.

Mr. David Prentice, called; and Examined.

3153. (*Chairman.*) You are, I think, travelling veterinary inspector for the Privy Council in Ireland ?—Yes. *Mr. David Prentice.*

3154. How long have you held that office ?—About five years.

3155. That has naturally given you a great opportunity of seeing everything connected with the keeping of pigs and the trade ?—Yes, it has.

3156. I think this Committee would especially like to hear from you what you can tell us in regard to the manner in which pigs are kept in Ireland from your own personal observation, whether the conditions of sanitation and so on are improving or not, and any other matters of that kind which are within your personal observation and experience as a travelling inspector ?—Swine are kept in Ireland in indeed very different conditions or indifferent conditions. I have seen them often in the houses of their owners, and I have seen them in sties varying from say an ordinary sized horse-box to about the size of an ordinary dog-box. Very frequently you will find the floorings of those pens to be some kind of pavement. You sometimes find a flooring of round kidney stones; you sometimes find a flooring of flags, occasionally of wood, but I think in the great majority of instances the floorings of pigsties in Ireland are simply made of earth, so that any fluids or anything of that description from swine are bound always to percolate through those floors. I think really within recent years there has been a little progress made with regard to the condition of the pigstes, but I think the progress is very slow.

3157. Are you inclined to think that recent legislation has had any effect ? We have had evidence given that upon the holdings of tenants who have bought their holdings under the recent Land Acts in some cases there has been an improvement observed ?—I think there has.

3158. Now in regard to this question of sanitation, have you any suggestions to make ?—With regard to the formation of pigsties, do you mean ?

3159. Yes, and not only on the question of fact, but we should like your opinion as to what changes in the law, if any, might be desirable with regard to enforcing a better state of things, and so on in the matter of sanitation ?—As a matter of fact I do not think that except by public health medical officers there is much supervision in the country over pigsties with regard to the condition in which the animals are allowed to exist. It occasionally becomes, I believe, the duty of sanitary officers, who are in some cases medical officers, and under whom there are laymen who are also sanitary officers, to bring cases under the notice of their authorities, if they consider in their opinion that so far as human beings are concerned there is any insanitation from the manner in which pigs are kept. Certainly I think that to improve the health of the pigs properly, as well as of the owners, there is room for considerable improvement with regard to the manner in which pigsties are built, and with regard to the improved drainage from them, and the improved floorings and matters of that description.

3160. You think it would be possible to compel owners of pigs to take out licenses before they can keep pigs ?—I do not think it practicable.

3161. Would you distinguish in your answer between pigkeepers in towns who keep pigs in large quantities and pigkeepers in rural districts ?—I am afraid it would be a very difficult thing to do in Ireland, because in some instances people who keep pigs live 15 or 16 miles off up the side of a mountain, away from where you might say that there was any one that could really explain to them what a license meant.

3162. Could anything be done in the towns ?—I think

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so; I think more progress could be made in that respect in towns, but in rural districts, in large country districts, it would certainly be very difficult if at all possible. Besides, in the Western districts there are a great many Irish speaking people there, and it would be very difficult to deal with those.

3163. (*Sir W. Kaye.*) Are swine kept in large numbers or more generally in small numbers by small proprietors, small holders throughout the country?—Generally I think by small people, that is to say what are described as small farmers. They keep one or two pigs. That is the general run of the manner in which pigs are kept in Ireland.

3164. Do you know of any large herds?—Yes, I have met with large herds, herds up to 20.

3165. But they are the exception?—Certainly.

3166. What is the manner in which young pigs are dealt with?—When they come to the age of about four months or six months they are usually sold as store pigs, and then they are kept by the person who purchases them as store pigs until they become fat, and then they are usually disposed of to exporters, or they are slaughtered in bacon-curing establishments in Ireland.

3167. Are they sold in public market generally?—Generally in public market.

3168. What is your idea as to the most practicable method of stamping out this disease in Ireland?—I certainly think that the practical method is to slaughter diseased swine and also to slaughter swine which have been in contact from any cause.

3169. Would you have that carried out by the local authority or by any other authority; the central authority?—I certainly think the central authority would be the better authority to carry it out.

3170. Would you approve of utilising the inspectors of the local authorities in the localities?—In Ireland of course it would be practicable in many instances, but in other instances I do not think it would be practicable.

3171. Where the inspector is a qualified veterinary surgeon?—I think his services might be utilised.

3172. But there are several unions and large districts in Ireland where there is no veterinary surgeon?—Unfortunately that is the case.

3173. Therefore that should be done by the central authority?—Certainly.

3174. Mr. Hedley just told us that you suggest that for that purpose the country should be divided into four provinces, and that an inspector under the central authority be appointed to take charge. Do you agree with that?—I think that would be a feasible means of working.

3175. When an outbreak is reported what steps would you recommend to be taken?—If it is a case where the local authority inspector in the first instance declares an animal to be affected I certainly think the officers of the Central Department should have an opportunity of verifying his conclusion as to whether or not the disease is swine fever. Then I think, as far as possible, it should be taken into the hands of the central authority and dealt with much in the same manner as pleuro-pneumonia has been dealt with.

3176. Supposing it turns out either by the report of the veterinary inspector attached to the central authority or by sending parts of the carcase up to Dublin for examination, that it is swine fever, how would you deal with the premises then?—I think the better plan to deal with premises of that character would be not, in the ordinary sense, to declare by a local authority, or even perhaps by the Privy Council, an infected place, but to serve on the owner a notice similar to what has been served under the Pleuro-Pneumonia Slaughter Order, which compels him not only to keep the present swine which he has on his premises, but also to prevent other swine coming on those premises, so that, as a matter of fact, it would entirely be equal in force to a declaration of an infected place.

3177. That is to say by that Order that you have referred to, all notices or licenses under the Article referred to may be given or granted by an inspector or other person authorised to grant the same? The inspector then could, on the spot at the moment, when he found that there was a case of swine fever, serve that restricted notice upon the owner?—And specify the premises that he wished the notice directly to apply to.

3178. To what extent would that go?—Of course it would not necessarily go as far as the notices specify in the case of pleuro-pneumonia because swine do not, as a rule, travel the land over like cattle do.

3179. Then you think the restrictions as to movement should be of a modified character as regard swine?—I do.

3180. For what period then would you keep the place closed?—I would certainly keep it closed for about six weeks at all events, I think; but under no circumstances would I be inclined to remove the restrictions until the premises were thoroughly cleansed and disinfected.

3181. What system of disinfection would you recommend as most practicable under the circumstances?—Well, of course, with regard to cleansing premises such as I have mentioned, with earthen floors and perhaps with wood above them, and so on, I think that while you would be able to cleanse them and scrub them to a considerable extent, you could not do it satisfactorily. I think the better plan, under those circumstances, would be, when you have cleansed them with water and scrubbed them as far as you possibly can, to absolutely saturate them with some disinfecting fluid.

3182. Did you find the service of those restricted notices under this Order effective in the cases of pleuro-pneumonia that you had to deal with?—Thoroughly effective.

3183. And it came into operation at once?—The usual course was immediately you restricted a place with this notice you went to the nearest police barracks and you informed the police of what you did. They took a note of what you did, and they attended to it as actively as possible.

3184. I understand that you agree with what has been said by Mr. Hedley that the 2*l.* and 4*l.* maxima are too low to induce the people to give full and free information?—I have no doubt of that.

3185. How would you have that altered?—At the present moment swine are exceptionally dear. I think that a maximum should be made of 10*l.*; not necessarily that it should approach that usually in giving compensation, but still I think a maximum of 10*l.* would be a very good maximum.

3186. You have seen that statement of the symptoms of this disease which was circulated among the local authorities?—I have.

3187. Are you able to tell the Committee if that has been used by any of the local authorities whose districts you have gone through?—I have frequently seen it pasted on walls and trees in the country. Papers headed "Swine Fever" have frequently caught my notice when driving along, and I have read them, and they have been copies of that notice.

3188. Do you think that it is thoroughly effective in calling the attention of the people to the thing?—Yes, it certainly has been. Of course they require a little more encouragement in the way of compensation.

3189. (*Mr. Stephenson.*) I understood you to say you would keep the places closed for six weeks after they had had diseased animals in them?—Yes.

3190. Why do you say six weeks?—Of course, when I say six weeks I do not mean that they should only be kept closed for six weeks. I mean more or less, so as to as far as possible give a likelihood, at all events, of the germs of infection not remaining; to give them some time to die, so to speak.

3191. If a place had been thoroughly cleansed and disinfected in six days, would not that be sufficient ?—It would if we could believe that every possibility of the germs of infection remaining had been destroyed.

3192. If you were there and inspected yourself, and it was done to your satisfaction ?—Yes, but you see it is this way ; with regard to such a thing as earthen floors in Ireland, it is a matter of fact that to get at those floors where the excreta such as the urine of the swine has percolated would require a very strong disinfectant.

3193. That might have to be carried away ?—I think so.

3194. Then do you think shutting up the place for six weeks would not be a great hardship to the owner of the pig ?—It would be a hardship, perhaps, to the individual, but the individual might have to suffer a little for his neighbours' good.

3195. Have you seen much swine fever ?—Yes.

3196. And made *post-mortems* ?—I have.

3197. And seen sick animals ?—I have.

3198. Do you agree with the symptoms as given in this circular ?—On the whole they are fair symptoms ; that is to say I should think that a person who would read those symptoms would think that he had swine fever amongst his swine if he had swine showing those appearances.

3199. Is it not a fact that redness in the skin is common to all diseases of the pig ?—That I believe to be true, to a great extent, at all events.

3200. Is it your experience that pigs may drop down dead without showing any previous illness from swine fever ?—I think that is quite practicable. I think so, but it is not my experience.

3201. You have not seen it ?—I have not seen that.

3202. Do you think it is a usual thing for pigs to die in from 24 to 48 hours of swine fever ?—I certainly think the time in that notice might be a little more extended.

3203. How much more extended ?—I think I would say four or five days, perhaps.

3204. Might you not safely say four or five weeks ?—Of course you might, but I doubt whether the animal will die after four or five weeks. Of course you get cases of swine fever where, I have no doubt, recoveries take place.

3205. Have you seen recoveries ?—I have seen animals that I believe have recovered from swine fever.

3206. Were they perfectly recovered or were they simple wrecks ?—They were wrecks, certainly.

3207. No good ?—No good—puny, so to speak.

3208. What is your idea of the temperature ? There is a sentence here to the effect that there is a lowering of the general temperature. Is that your experience of it ?—I think at a certain period of the disease there is a heightening, a rising of the temperature.

3209. Have you taken the temperature of diseased pigs ?—I have.

3210. What did you find the highest on record ?—I did not find it low ; I found the temperature of the diseased pigs up to 104.

3211. Not higher ?—I have not found it higher.

3212. (*Mr. Shaw.*) You put your maximum at 10*l.* ?—Yes.

3213. May I ask why you put it so high ?—The simple reason I put it high was this, that you might have, say, a boar pig which would be of considerable value—of course, you might possibly have boar pigs of more value than 10*l.*—but still, that was the reason, that you might have special instances where you would be inclined to give at least 10*l.*

3214. Is there not a fear in that particular case that they would argue from the particular to the universal, and expect to get 10*l.* for almost any pig ?—Hardly, because in the case for instance, of compensation given for pleuro-pneumonia, the maximum was 40*l.* Well, that was very seldom arrived at, except in the case of special herds and prize animals.

3215. Then your idea would be in the case of a thoroughbred boar, we will say an imported Yorkshire boar, that you would be inclined to stretch a point as regards a pig of that class, and to give the man 10*l.* ?—I certainly would.

3216. But that would not be the rule at all in the case of boars ?—Certainly not.

3217. Then I take it you would make 10*l.* an exceptional amount ?—An exceptional amount.

3218. That would, you consider, to be about a fair average amount—I mean to say for a large pig ?—I suppose a fair average amount would be about half that.

3219. It is mentioned in this circular that pigs suffering from swine fever frequently drop down dead while feeding. In your experience do pigs usually feed when they have swine fever ?—They do not in my experience. A pig is more inclined then to make himself as scarce as possible with regard to feeding, and so on.

3220. Then you do not think so far as this part of the circular is concerned that it indicates swine fever at all ?—With regard to the loss of appetite do you mean ?

3221. I will put it this way. Is not one of the indications of swine fever a complete loss of appetite ?—At a certain stage of the disease, yes.

3222. And an intense thirst ?—Yes, at a certain stage of the disease, certainly.

3223. How comes it then that sometimes an affected pig drops dead while feeding ?—It might. I do not exactly know that that is really the case.

3224. Would not that implicate to your mind something more of the nature of apoplexy ?—It would certainly, or perhaps choking or something like that.

3225. I see the circular goes on to say, "Generally "the attacked animal evinces sudden loss of appetite, "dulness, debility, smallness and frequency of pulse, "ears and tail motionless." It seems to contradict itself. Do you not think that frequently nettle rash, commonly called in Ireland "diamonds," is mistaken for swine fever ?—I cannot exactly say that it is, but I do not see that it should not be by people who are not sufficiently conversant with swine fever or with the *post-mortem* appearances of swine fever.

3226. Without in any way desiring you to give an adverse opinion upon your own profession, do you not think that from one reason and the other, the veterinary profession have not taken the same interest in getting up the subject of swine diseases generally as they have the diseases of other animals on the farm ?—Perhaps it may be that swine have been animals of so little value as compared, say, with cattle or with horses.

3227. (*Professor Brown.*) From your experience in travelling about Ireland, are you of opinion that if people saw that they would get compensation to a proper amount, they would be disposed to notify the existence of disease ?—I believe they would.

3228. Under those circumstances, is it your opinion that with proper regulations the disease might be got rid of ?—I believe so.

3229. Then I may take it that you do not see any special difficulties in dealing with swine fever in Ireland, at any rate no more than there would occur in dealing with it in England ?—I do not. Of course I am not conversant with the manner in which swine are kept in England, but I know that they are kept in Ireland in very obscure places, and places very

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hard to be got at. At the same time I do not mean it to be understood that there will be a difficulty in dealing with it.

3230. The gist of your evidence appears to be that if proper steps were taken there would be no reason to fear that they would fail?—I have no reason in the world to fear the failure, if proper measures were adopted.

The Witness withdrew.

MR. JOHN TREADWELL, called; and Examined.

Mr. John Treadwell.

3231. (*Chairman.*) I think you are a member of the Executive Committee in your County of Buckingham?—Yes.

3,232. You are also a breeder of pigs in that county?—Yes.

3,233. In that way you have had your attention turned to the whole subject of the diseases of animals, including pigs?—Yes, I was a member of the Executive Committee previous to the County Council coming into operation.

3,234. One of the co-opted members?—I have been a member ever since the cattle plague.

3,235. Will you, in the first place, tell the committee whether there has been much swine fever in your county?—From time to time we have had a good deal, in fact we are scarcely ever free.

3236. What course has been adopted by your county to deal with the disease?—At one time we killed and compensated, but we found that that was so expensive, inasmuch that as soon as we got rid of disease by that action in our county it was re-introduced from neighbouring counties which did not kill and compensate.

3237. At what date did you stop paying compensation?—I have not the dates with me.

3238. About how long ago?—I think it was previous to the County Council coming into operation, I think so; I am not certain.

3239. That would be previous to 1889?—Yes.

3240. From what counties did you suffer most?—From Bedfordshire and Oxfordshire. Bedfordshire has been very wicked.

3241. When you say Bedfordshire, had you any special reason to suspect the city of Bedford as distinct from the county?—We have had the disease communicated to us so many times from Bedfordshire that we hardly know whether it comes from the borough or out of the county. The county authorities, I am sorry to say, are very lax in Bedfordshire, and have been all along; in fact I do not think they have ever applied to have circles round the disease.

3242. Are you aware that the opinion in Bedfordshire, as stated to us, is that the county has been vigilant, but that the Borough of Bedford, which is within the county, renders a great deal of their orders and work useless?—That may be so, but I cannot say that the county has been vigilant, because I know to the contrary.

3243. You think the County and Borough are one as bad as the other?—I should not give a pin to choose between the two.

3244. You are aware, are you not, that the Borough of Bedford is an independent jurisdiction?—Yes, certainly.

3245. What is the present state of things in your county. Has there been a diminution during the last year?—I think we have more cases at the present time than we have had for some time, in fact we have had so many cases lately that I have a motion on the agenda for to-morrow's meeting, to ask our committee to represent to the Government the necessity of their taking action in the matter.

3246. Now will you explain to the Committee why it is that the regulations that you make against neighbouring counties in regard to movement in order to keep out the fresh importation of disease are useless. Is it especially because of dealers coming in?—The course that is taken is, that if we prohibit pigs coming in from Bedfordshire, they will work them round into some other counties, say Hertfordshire, or Middlesex, and get them untrucked where there is no prohibition, and then come across that county into ours. We have had to amend our orders very recently in consequence of finding that out, so that we make it that they shall not have been in the county of Bedford for 28 days. We cannot trace all those cases probably, but if we do find a case of disease, and trace it back, we should then come upon them for a breach of the regulations.

3247. In fact you look upon the county of Bedford as one of the great centres of swine fever, in England, apparently?—It has proved itself so to us. I must say that Oxfordshire has not been as vigilant, we think, as they ought to have been. We look upon the county of Bedford as doing a great deal towards stopping uniformity of action altogether. I myself have attended two conferences of the neighbouring counties brought about by our Executive Committee, to see whether we could get some uniformity of regulations with some adjoining counties, to make a centre to start with, but we found that the Executive Committee of Bedfordshire were composed of such men, and their interests were so antagonistic to what we thought ours were, that we could make no way with them, they would not commit themselves to it. For instance, tradesmen and those sort of men who are on the committee, quite thwart us in every way. Both those conferences broke up and did nothing.

3248. Is your county one with very inconvenient boundaries at many points, to watch?—Ours is a very long, narrow county. You will find that we have market towns on the borders, in several instances in the adjoining counties. Take, for instance, Thame, in Oxfordshire, it is almost a Buckinghamshire market; take Leighton, a town in Bedfordshire, that is almost a Buckinghamshire market; then again Bicester, in Oxfordshire, closely joins Buckinghamshire, and that is almost a Buckinghamshire market.

3249. I suppose a long straggling county like yours, in your opinion, would be one especially difficult to watch?—No doubt, because we have so many counties adjoining us. Hertfordshire, Berkshire, Oxfordshire (Middlesex I think almost joins us, if not quite) and Northamptonshire. We could readily get rid of disease and have done it, by killing and compensating if we did not get it reintroduced.

3250. You find that the power that these people have of dodging the pig through from one county to another is one too many for you?—It is.

3251. Are you acquainted with the regulations in regard to the transit of pigs through a district?—Yes.

3252. I mean the regulations made by the order under the Act?—Yes.

3253. Have you anything to say specially in regard to those. Do you think that these facilities of transit are insufficient for their purpose, or rather that they possibly prevent other regulations being effective?—I hardly see how you can stop railways from conveying pigs through your county. Neither do I think they will spread the disease unless they are unloaded.

3254. You have no complaint to make in regard to that branch of the subject?—No.

3255. Now, would you tell us whether within your county there are any independent jurisdictions like that of Bedford, in Bedfordshire?—We have Wycombe. I do not think Buckingham is now. I think it used

to be, but it is not now. I think we have only Wycombe.

3256. Does the borough of Wycombe give you any trouble?—I am bound to say they have not given us any trouble to speak of. If they did we should very soon boycott them.

3257. You think you would be strong enough to compel them to do their duty?—We should shut them up; in fact, boycott them.

3258. On the whole you are clearly of opinion that the number of authorities is the great difficulty in coping with the disease?—The want of uniformity of regulations has a good deal to do, no doubt, with the spread of disease. But if you have uniformity of regulations you must kill and slaughter. That is the first point you must go to; you cannot have uniformity of regulations unless you do that, in my opinion.

3259. In order to secure uniformity what would you do, would you transfer the dealing with the Act to the Board of Agriculture?—Most decidedly. But I do not think that you would find some of the local authorities, even if the Government kill, sufficiently strong to carry it out promptly. I know in my own county, when we had a new committee under the County Council, they killed a man's cows and actually refused to compensate him afterwards. That is what I am afraid you would get in some of the other County Council Committees. You get a lot of men who are not acquainted with agriculture, and they do not see the necessity of doing what we agriculturists think ought to be done.

3260. Therefore, you would hand over compulsory slaughter and compensation to a central authority?—No doubt we shall never get rid of it until we do that.

3261. Would you keep the inspectors under the local authority, and make them report to the Board, or would you have all the inspectors appointed from headquarters?—I think you could not carry it out by Government authority, by having all the inspectors from headquarters. In the first instance you must have the report from the local inspectors I think just as you do now with regard to pleuro-pneumonia; you have the local inspectors reporting there in the first instance to the central authority, and then the central authority sends down its inspectors to carry it out.

3262. In regard to the salaries of those local inspectors, would you be content to make those a charge on local funds?—If you take the broad principle of the thing, it is that if these animals are to be killed and compensated for, for the national good, it ought to be a national charge.

3263. Would you charge the salaries as well as the compensation?—I think so. I cannot see how you can separate them. Of course, half a loaf is better than no bread, but still we want to get rid of the disease, and we think it is a national affair, and that it ought to be paid for by national property.

3264. Several witnesses have told us that they think more might be done in regard to sanitation. Do you think it would be possible or desirable to compel pig-keepers to take out licenses?—Oh, dear no.

3265. Would you object yourself to such a regulation?—I do not think you could carry it out. How are you to carry it out with all those poor men's pigs about the place?—Now they have got allotments as they have, how are you to carry out a license for them?—No Government could carry it out, I think.

3266. Let us take a case of a town and a country separately. Do you think it might be possible to carry it out in towns in cases where men keep a considerable number of pigs together, and sometimes become a nuisance to the health of both man and beast?—Then they are very soon got rid of, I should think, unless the sanitary authority is very much to blame.

3267. I daresay you know that the sanitary authorities are sometimes very lax?—Yes, but they are reported to be so oftener than they are, I think.

3268. Have you ever heard of a local board or town council trying to carry out regulations about the distance at which pigsties could be put from houses and the members being all turned out at the next local board election?—I happily have not had much to do with local boards or local board elections, and I am not prepared to speak.

3269. Do you think such a thing might be possible?—I am not prepared to give an opinion upon that.

3270. You think it would be very difficult to carry out any such regulation, even if it were possible in the towns, and that it would be practically impossible in the country districts?—I think so, quite.

3271. Is there anything that you would like to say to the Committee in regard to the amount which is allowed for compensation when a pig is slaughtered?—I should think when an animal takes the disease, if it is slaughtered diseased, half the amount is fair, and for those that are killed which were in contact I think the full amount ought to be paid.

3272. The full amount in case of a contact pig is paid now, is it not?—Yes.

3273. So that, on the whole, you are satisfied with the existing regulation?—I think so.

3274. Would you put any limit upon the total amount which can be paid, because you know there is limit now?—I think the limit is full low enough, although in these days, unless you get into a herd of pedigree pigs, you do not get pigs of so much value as you used to do. They are not kept so old, and are not worth so much. Pigs are generally killed smaller. We used to get in olden times 20-score pigs, and if they were worth 8*l.* or 10*l.*, 4*l.* would not be suffieient for those; but there are not many of those about now.

3275. Has it ever come to your notice that when, owing to other circumstances, the movement of animals has diminished owing to bad trade or to anything of that kind, then swine fever has gone down?—We have found that stopping the markets is a great means of getting rid of the disease.

3276. I meant rather this: we have been told by one witness at least that there have been occasions when, owing to other circumstances, not owing to orders issued, but owing to other circumstances, the movement of animals has diminished; for example, bad trade, increased railway rates, or matters of that kind; and that it has nearly always been observed that at that time the disease has gone down. Now, has that ever come within your notice?—It has occurred with me only with regard to the markets. I may say that our system in our county perhaps varies a little in dealing with the disease to what it does in some counties. We have an order to use the half-mile circles, and, as soon as our disease is reported to the inspector of police, who is the inspector for disease, he draws round a circle of half-a-mile, and then if he thinks there is no reason why he should shut up certain roads, and that the circle might be decreased, he applies to the nearest member of the Executive Committee, who has power to order the contraction of the circle to not less than 100 yards. He must not go less than 100 yards, but he may if he thinks it is advisable, and there is no danger in doing it, contract that circle to 100 yards of the infected place. Then at our next meeting of the Executive Committee, that is brought up and either confirmed or altered. Sometimes, when we come to get a plan of the place before us, or when some of us know the place, we think that it might be altered a little one way or another, and we alter it; but, as a rule, that is the way it is done. All our members of the Executive Committee now understand pretty well what they have to do, and they do not contract the circle so as to leave any danger outside of the circle.

3277. (*Professor Brown.*) From what you have seen in your county, do you think that swine fever can be stamped out?—I do, quite decidedly.

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3278. Then what has been done in your county and in other counties might be done over the whole country, or over the whole kingdom, if you can get uniform regulations?—Decidedly so.

3279. I gather from what you said that, in order to get perfectly uniform regulations, they must emanate from one authority?—I think so.

3280. You are of opinion that the local inspector should still continue to be employed in the first place?—I cannot see how it can be done without you get the notice soon enough to do good.

3281. You are aware that that plan has been adopted by the board in pleuro-pneumonia?—Yes.

3282. That local inspectors have been used as far possible?—Yes, in the first instance.

3283. But you think that the Board should send down some one to superintend the carrying out of the regulations?—I think so, most decidedly.

3284. In reference to the salaries of the inspectors, you said that they should be paid by the Board, but you did not mean that the salaries of the local inspectors always should be paid by the Board?—Those inspectors that we appoint undoubtedly we must pay That is the rule generally through those things.

3285. Quite so; those inspectors would be the persons who would first of all give notice?—Yes.

3286. Then I understand you to mean that if those same inspectors are employed by the Board to take further steps the Board will necessarily pay them for their work?—I think so.

3287. Are you aware that that has been done also in pleuro-pneumonia?—No, I am not.

3288. It is the case?—I was not aware of that. The pleuro-pneumonia business has been taken out of our hands, and I have not known anything about the details.

3289. Then I gather from the whole of your evidence that you see no special difficulty in carrying out the regulations over the whole country, and that, in the event of such regulations being applied, there is every prospect of getting rid of swine fever?—I am quite of that opinion.

3290. (*Sir Jacob Wilson.*) I believe that you are a large dairy farmer?—Yes.

3291. Would you tell us what becomes of the milk from your farm?—My milk goes to the Condensed Milk Factory at Aylesbury, except on the Saturday night. On the Saturday night it comes up to London, and the Sunday morning's milk we make into butter, and have the milk for the calves.

3292. In consequence of having a large dairy farm, have you an unusual number of pigs?—I generally keep five or six breeding sows, not so many as I did since the trade was so bad, but I usually keep five or six now I think it is, and their produce I feed out. I have had the disease too.

3293. I gather that in the event of an outbreak of swine fever you attach considerable importance to establishing a large area when it is necessary to do so, in order that you may have full control of the disease?—Yes; the larger the area under one regulation the better in my opinion.

3294. So that you may have full control and uniformity of action within that area?—Yes; our idea was in having those conferences in get a nucleous to start with, so that we might extend and extend, and then to stop supplies coming from those people who would not fall in with us.

3295. Do I gather that more than one attempt was made to induce the Bedfordshire authorities to join you in common action?—Twice we have met in London in conference with the neighbouring authorities. I think once Bedfordshire refused to come, and once they came and opposed us altogether.

3296. Do the farmers and stock owners of Buckinghamshire attach great importance to swine fever?—There are not so many farmers now keeping pigs as there used to be in the old days of butter-making in the county. Now our principal industry is the milk trade on the dairy farms, and there are not so many pigs kept, and I should think that there would not be that interest attached to the pig business that there used to be, and those who do keep the pigs are very much interested in the matter, and would be very glad to get rid of the disease so that their trade would not be cramped so much.

3297. Is it your experience that pig dealers' premises and carts are a fruitful source of disease?—Yes, we generally trace the disease to those places. Since our County Council has had the management of the disease, we have a report from our inspector as to where those pigs all come from which had the disease, and we try to trace them to their sources if possible. That is how we came to trace them into Bedfordshire. We have a report in the case of each outbreak.

3298. I think you told his Lordship that you thought it would be impracticable to require licences from the owners of pigs?—I think so.

3299. Would you regard it as impossible to require licences from dealers?—No, I think that would be a very good thing.

3300. Does your experience of dealing with pleuro-pneumonia and foot-and-mouth disease by the central authority justify the confidence you have in the probability of exterminating swine fever?—Most decidedly.

3301. I gather that you attach great importance to the stopping of markets and movement of pigs when disease is prevalent?—Most decidedly.

3302. Therefore is it your opinion that compulsory slaughter accompanied by compensation and with judicious restriction on movement would be the most likely means of exterminating that disease?—The only means, I think.

3303. (*Mr. Shaw.*) I think you said that it was the opinion of you and your countrymen that Bedford was a particular hotbed of disease?—Yes, it has proved so.

3304. Did you refer to the county of Bedford or to the town of Bedford?—I take them both alike.

3305. There are a number of dealers in Bedford that profess to deal in pigs, I believe. Do they bring cartloads of pigs and the like into your country to sell to the farmers round and go and attend the markets?—I think those people perhaps that you are alluding to are a class of men that advertise pigs for sale and send them to far distant counties and very often send disease with them. Those are the gentlemen that we know a goodish deal about, although we have not been able to drop upon them in our county.

3306. You would be in favour, then, of registering those men, and having their premises, as well as their carts, subject to irregular and periodical inspection?—I should agree to that, certainly.

3307. I think you said that you have had swine fever in your premises?—Yes, I have.

3308. Were you able to tell how it came in?—Yes; in one case I bought some pigs, and I very soon had the disease. Luckily I had them on an off farm, and it did not spread.

3309. Did you buy them in the market?—No, I bought them of a dealer.

3310. A circular has been isssued by the Irish Privy Council. From your experience of swine fever does this hold good, that sometimes the affected pig drops dead while feeding. In your opinion, as a rule do pigs affected with swine fever feed?—I have seen two cases. In one case the pigs ailed, and dragged about some time before any of them died; and in one case, but only one, we saw pigs drop dead, one at a time, without any ailment, or without being seen to ail.

3311. But not in the act of feeding?—I was not there; some one else fed them. I do not know about that. They were found dead.

3312. Are you in favour of police inspection, and of giving powers to the police to come into premises and inspect them if they suspect that there is swine fever on the premises?—I should prefer, if the police

had that suspicion, for them to send the veterinary rather than to have the police poking about any time and every time they wanted.

3313. Of course your county is a small one, and I presume a fairly thickly populated one; but in outlying places, where the inspector would be a long distance from a certain place, should you not think it would be an advantage for the police to be able to come in on the premises and see whether there are any sick pigs?—We are not so very fond of having the police poking about when we do not want them.

3314. You think you voice the sentiments of other farmers when you say you do not care to have the police poking about your premises?—I am sure we do not.

3315. (*Mr. Carrington Smith.*) Does the Aylesbury Condensed Milk Company keep pigs itself?—Yes.

3316. Have they had the disease, do you know?—I have never heard of it.

3317. What counties do you prohibit or boycott?—Bedfordshire at present; we have been compelled to serve Oxfordshire the same, but I think Bedfordshire is the only one at the present time.

3318. When you spoke of men sending pigs to other counties, had you in your mind those who are called with us crate men?—Those were not; those were pigs that were bought in Bedfordshire and brought to a place perhaps in Hertfordshire, or somewhere off a station where they could get them out without any order, and then came round through Hertfordshire into our county. Then we had to make an order to make them be on the premises 28 days before we admit them.

3319. Then as far as your own county is concerned you have no experience of pigs coming into your county in crates before you inhibited Bedfordshire?—Yes, we have had some isolated cases of pigs coming in crates and failing with the disease, but we have had it in so many ways that I almost forget single cases.

3320. Have you frequently prosecuted for offences against the regulations or against your orders?—Our chief constable prosecutes in every case in which he thinks he can get a conviction. The prosecution does not lie with the executive committee; it lies with the police. If the law is broken, the police act upon it. Of course, when he reports to us, we say, you know your duty. We perhaps hint to him in that way.

3321. As a matter of fact have you many prosecutions?—From time to time a good few.

3322. What independent authorities have you in your county besides the county authority and the boroughs?—I do not know that there is one besides Wycombe. I am not sure, but I do not think so.

3323. Then that does not act with you; it acts on its own authority?—It acts on its own authority, but we have not had much trouble with Wycombe.

3324. When had you disease yourself?—It was the the time they were compensating for it—some years ago.

3325. The authority ordered the slaughter?—Yes.

3326. You did not let many die?—No; I have had it twice. At one time it was among a lot of fat pigs. I think I took and killed them on my own responsibility.

3327. You have had the disease twice, once when there was no compensation, and once when there was? No, I think there was compensation at that time too. I think I killed them on my own responsibility, and did not ask for compensation.

3328. You did not claim?—I did not claim.

3329. That shows that your opinion is most decidedly in favour that the only course to take is slaughter?—I am satisfied of it.

3330. (*Mr. Stephenson.*) You say that in your county you used to kill and pay compensation?—Yes.

3331. Do you do so now?—No; it did not pay. We got the disease introduced from other counties, and we got none the "forrards;" so we thought we might as well save by it.

3332. That was entirely due to the want of uniformity of orders?—It was, I believe.

3333. Now, you say the trouble of your county, or rather a difficult question, is that you are bordered by other counties,—you are a long narrow county, I understood you to say?—Yes.

3334. And that makes it more difficult for you to be free?—Yes. I may say that Berkshire has behaved uncommonly well always with us.

3335. Is that difficulty not also due to want of uniformity with your neighbouring counties?—No doubt of it.

3336. It is not from any fault of the shape of your county, it is from the want of uniformity of the law?—Yes; but there is another thing, that there is more chance of their smuggling them in when you have a long, narrow border like that.

3337. Have you any sub-committees in your county?—No. At the time when the County Council Act came into operation they very much pressed to have some sub-committees, but all the old members stood out against it, and we soon showed them that it could be worked better by one authority.

3338. By the executive?—Yes.

3339. How many veterinary inspectors have you in the county?—I cannot say how many, I should think eight or ten.

3340. Have you a chief veterinary inspector?—Yes; Mr. Lepper is what we call the consulting veterinary inspector.

3341. I would like to ask you about the pigs that you found dead one after another; are you quite sure they died of swine fever?—A veterinary surgeon told me so.

3342. Did you lose all your herd;—No; it broke out among a lot of fat pigs; there were three died one after another, and I did not take so much notice until I got the third, and then I sent for the veterinary, Mr. Lepper. He came over and made a *post-mortem* examination of that pig, and also of one that died previously. He pronounced it to be swine fever; so then I killed the lot out, all except a little lot of pigs which were good for nothing much. They had not been in actual contact, although they were in the next sty. I put them a little further away, in another place, and tried them for a fortnight or three weeks—for a fortnight I think I might say. One of those died in the same way—was found dead without any warning. I sent for Mr. Lepper again; he said it is the old tale. He showed me the gut, where you get the ulcers.

3343. Is the committee to understand that when these pigs died the *post-mortem* showed lesions in the bowels?—Yes.

3344. But that during life they showed no symptoms of disease?—I was never acquainted in any of the four pigs of any one ailing.

3345. You were not acquainted with it?—No.

3346. No one told you?—No.

3347. Is it not possible that these pigs might have suffered from the disease and you not know it?—I think my man would have told me.

3348. (*Mr. Carrington Smith.*) Did you kill the remainder of the pigs?—Yes, we killed them all, and never found a trace of disease in any of those we killed, only in those that died. It was a most extraordinary thing, it was unique in our experience.

3349. (*Chairman.*) Your county boundaries are very curious, are they not, on the side towards Hertfordshire?—Over-lapping almost, so to speak.

3350. By Aylesbury in that direction?—Yes, I think Hertfordshire comes in quite a nook into our county.

3351. I suppose it would be almost impossible there to prevent a diseased pig being smuggled in from a neighbouring county?—It is the business of our police

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to prevent it. We have not so much crime, and they may as well be doing that as anything else.

3352. Are there not roads running from one part of the county to the other, but across another county?—I think the roads from one county to the other are pretty much so that they can be guarded, they are in main roads rather,—they are not so many little roads.

3353. (*Mr. Wardlaw Ramsay.*) In one answer that I think you gave to Sir Jacob Wilson I understood you to say that you thought the larger the infected area the better?—No, I did not say so; the larger the area to deal with I meant, not the infected area.

3354. You rather treated the whole of the country as an area in your expression, then?—The area for working.

3355. (*Chairman.*) I think you were asked a question which you understood in one sense, but which was asked in another. Sir Jacob Wilson's question related, not to the size of the authority, but to the size of the district declared to be infected. Is it your opinion that the larger that district the better for the purposes of stamping out the disease?—I would not go so far as to say that. My opinion is that the infected place is not large enough. You want a circle but I think a half-mile circle is sufficient. If you find the disease spreads farther of course you will increase your circle with every outbreak of disease.

3356. Therefore, on the whole, your opinion is, whether you call it circle, or area, or place, that the larger the district so dealt with the better?—I would not go so far as to say the larger, because it is unlimited.

3357. I mean that the proclaimed district ought to be——?—At least half a mile.

3358. Sufficiently large to be quite sure of dealing with the evil?—That is my opinion.

3359. Your practice has been, I understand, to declare a circle of half a mile?—Exactly so.

3360. It is not the law, I am not saying that it is illegal, but it is not compulsory on you, it is your practice, and it is no doubt a very good one?—I was going to say, if it is not legal, it ought to be.

3361. I did not say it was not legal, but I say it is not the law in the sense of being compulsory on you?—I think it acts very well, it generally stops the disease, but we generally get a fresh outbreak from somewhere else.

The Witness withdrew.

Adjourned till to-morrow at 10.30.

SIXTH DAY.

Saturday, 11th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE IN THE CHAIR.

Sir WILLIAM S. B. KAYE C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. ALEXANDER SHAW.
Mr. T. CARRINGTON SMITH.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary.*

Professor J. WORTLEY AXE, called; and Examined.

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3362. (*Chairman.*) YOU are Professor at the Royal Veterinary College?—Yes.

3363. In that capacity you have naturally given a great deal of attention to the diseases of animals, including those of swine?—That is so.

3364. You are aware that the subject matter of this inquiry is as to the best method of dealing with swine fever?—Yes.

3365. Will you kindly tell us from your large experience your view as to the character and nature of the disease in the first place?—It is a specific eruptive fever of a contagious and infectious nature.

3366. Do you consider that it is properly denominated swine fever, or do you think that the designation of it could be improved; the description of it in the Acts and Orders dealing with it?—No, I do not think it could be improved; I think that general term is a useful working term.

3367. Now, in regard to the mode in which this disease is spread, can you tell us your view?—As the result of my experiments performed some years ago, I found that it was capable of spreading through the medium of the atmosphere, that is to say, by mere cohabitation without contact; secondly, that it was capable of being transmitted by inoculation; and thirdly, by ingestion or through the medium of the food.

3368. Your view, I understand, is that the disease does not originate from dirt and filth?—No.

3369. Although dirt and filth may tend to keep it up after it has once begun?—Yes, bad sanitary arrangements and want of care favour its spread.

3370. The virus has very great vitality, has it not?—Yes, it has. It is difficult to say precisely what period of time it will live outside the body, but some observations which I made some years ago established the fact that it was capable of existing for 18 days, and of being effective as a virus. It may possibly have a greater period of vitality.

3371. What is your view as to the character of the virus?—Is there supposed to be a live animal in it of any kind?—It is said to consist of a living organism.

3372. Now when the disease breaks out, what are the symptoms?—The earliest symptoms of the disease consist in a rash which usually presents itself about the roots of the ears, down the side of the throat, and on the inner aspect of the arms and thighs and under the belly. Then in some instances we have an eruption which may be of a papular character, and subsequently result in the formation of vesicles, or we may have simply a desquamation of the cuticle. Elevation of the temperature, with extreme dulness and prostration. At first, constipation of the bowels exists, which is followed very frequently by diarrhœa, the fæces in some instances being bloodstained. There is a disposition on the part of the animal to bury itself in the litter, seeking warmth. Fits of shivering come on from time to time, and not infrequently, delirium, paralysis in the hind quarters, and every now and again we have sloughing of the tail and sloughing of portions of the ears.

3373. What is your view as to the possibility of stamping out this disease?—Do you think it is possible by any machinery to destroy and stamp out the disease?—Certainly.

3374. Now will you tell us what you consider are the principal weak points in the present machinery?—It has not a strong one. Firstly, it is absolutely necessary if it is to be stamped out that it should be placed under the central authority. I think that is the first thing to do. Nextly, that a system of slaughter and compensation should be adopted—liberal compensation.

3375. (*Mr. Stephenson.*) Liberal?—Slaughter and liberal compensation both for diseased and contact animals.

3376. (*Chairman.*) I understand your answer in regard to the desirability of the disease being dealt with by a central executive to be based largely on the desirability of restrictions on movement?—And a uniform action throughout the country; want of that has been the cause of the failure of the present system of dealing with it.

3377. Your policy, therefore, is one of restriction on movement, with slaughter and compensation by the central authority?—Precisely.

3378. Have you any special cases that you would like to lay in some detail before the Committee illustrating the difficulty of dealing with the disease by local action?—I think we have a parallel with this disease in cattle plague. The virus of this disease corresponds more to cattle plague perhaps than any other with which we have had to deal.

3379. (*Mr. Carrington Smith.*) Rinderpest do you mean?—Yes. In that case the virus was capable of taking effect in the three directions which I have named, through the medium of the atmosphere, by inoculation, and by ingestion or through the medium

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of the food. That being so it would perhaps be a little more difficult in point of detail to manage than would be pleuro-pneumonia, in which we have a disease only capable of being communicated from one animal to another through the medium of the atmosphere by actual cohabitation. I think, however, there is an advantage in favour of its being successfully dealt with in the fact that swine plague has a short incubative period, while pleuro-pneumonia has a long and uncertain incubative period.

3380. (*Chairman.*) Assuming that the Board of Agriculture or some central authority were to take over the dealing with the disease would you describe to the Committee what, in your view, the relations of the Board of Agriculture and the local authorities would be—whether you would leave any sphere of action to the local authorities in communication with the Board of Agriculture?—None whatever; everything should be done by the central authority.

3381. Let me bring that out a little more in detail. Would you not leave the duty of communicating the fact of an outbreak in the first instance to the individual who would communicate it to a constable?—Precisely.

3382. That constable would be the servant of the local authority, would he not?—Yes.

3383. Then his duty would presumably be to give information to an inspector?—Quite so.

3384. Now whose servant, according to your plan, would that inspector be?—Would he be the servant of the local authority or of the Board?—Of the local authority. What I mean is that after notice had been given by the local authority then the central authority should take the matter in hand fully and completely.

3385. In the case then of an outbreak you would leave the primary duty of giving information as to the disease to the individual and to the local authority, and at that stage, or immediately after that stage you would then bring in the central authority in regard to restriction on movement, slaughter, and compensation arising out of slaughter?—And the subsequent dealing with the infected premises; in fact everything should be left to the central authority after notice of the outbreak has been given.

3386. On what fund would you propose to charge the salaries of the inspectors? Would you make that a central charge or a local charge?—I think the central authority should deal with it.

3387. Would any difficulty arise if the central authority was charged with these duties in ascertaining whether or not the disease was swine fever; I mean with regard to the necessity of possibly sending portions of the diseased animal for examination to the Board of Agriculture; would there be any danger in that?—I think it would be very desirable that parts should be sent to the central authority.

3388. You do not think there would be any risk of disseminating the disease by sending those parts up?—No; not if proper care were taken.

3389. A good deal turns upon the possibility of obtaining proper care?—Yes.

3390. As to what degree of reliance could be placed upon it?—Quite so, it is so.

3391. But you yourself think that the risk would be worth running?—Yes, I do.

3392. Now I wish to pass to another aspect of this question: whether it is desirable, either by the action of local authorities or otherwise, to take steps, more than is at present done, in regard to the conditions which tend to keep up the disease; I mean in regard to sanitary legislation?—That, I presume, refers to the present condition in which pigs are kept. I do not know whether any advantage would arise from any general interference with the pig keepers. I apprehend that all the benefit to accrue from the action of the central authority would be effected by its operating upon actual outbreaks.

3393. It has been suggested by some witnesses, in reply to questions addressed to them by myself and other members of the Committee, that you might strengthen the law and that you might also give a county officer some power of supervising the minor local authorities in regard to sanitary administration?—I think there is one thing out of which benefit might arise; to insist that all local authorities should see to the saleyards, where pigs were congregated together, being paved, and all markets being paved, as well as all public and private sale-yards, with the object, of course, of more effectually disinfecting the surface on which diseased animals may have been placed.

3394. Would it be desirable to license places where pigs are kept, for the purpose of the suppression of the disease?—I think it would.

3395. It has been stated to us that it might be very difficult to carry out such measures, and that the utmost that could be done would be to license those places where the pigs are kept in large numbers in towns and places of that kind. Now is that your view?—No. I think if I did adopt a system of licensing I would make it of general application.

3396. Do you think you could make every man who keeps two or three pigs at the back of a cottage in the country take out a license?—I do not see why you should not.

3397. You do not think the law would be one of those laws that would be resisted and therefore not carried out?—It just depends, I apprehend, upon the cost of a license, or whether you are going to charge anything for your license. Would it not be better to adopt a system of registration, so that all men having a pig-sty should be registered.

3398. That is a suggestion that has been made, and which I was asking your opinion upon, as to whether that would be desirable?—I think a system of registration would be desirable.

3399. A register would practically imply a licence of some kind?—Yes.

3400. A man would go to some place in the nearest town, the post-office or some other place of that kind, a revenue officer, and register his place, and then be given something which, in form, would practically be a license, would it not?—Yes.

3401. You could make the fee on that as high or as low as you like?—I should not charge anything. I should make it mere registration.

3402. You are, however, aware that it often happens that local regulations in regard to sanitary matters are very defectively carried out?—Yes; and I do not think it would be desirable to complicate the question any more than possible. I do not apprehend that it will be a very long business to stamp out the disease, if placed in the hands of the Central authority.

3403. But I suppose that during the period you are engaged in stamping it out, a rigid enforcement of sanitary regulations would be a very desirable ancillary measure?—Certainly.

3404. Therefore, do you think it would be desirable where a local authority was inclined to disregard its duties in these matters to give some other authority, a county authority for example, the power to intervene?—Yes, certainly. In any case where the local authority did not carry out its duties, then I think the central authority should take the matter in hand.

3405. I was not asking at this moment about the central authority, but about a local authority representing a larger area, namely, the county area. Do you not think that you might, for example, find a considerable amount of resistance to a central authority interfering in such minute matters as the cleansing of pig-sties and things of that kind when it would be looked upon as the natural duty of a county officer to intervene?—I do not see why a local authority should not recognise the importance of carrying out a duty like that fully and efficiently.

3406. That is not quite my question. You may think it very natural and desirable, but do you think

it would be possible for a central authority, though it might deal with actual outbreaks of disease, to interfere, all over the country, with such minute matters as the regulations of local authorities with regard to cleanliness?—Yes; I think it is possible, and I think it is necessary.

3407. Is it not within your knowledge that the tendency of all legislation, especially of late years, has been to throw the duty of dealing with sanitary questions on local authorities?—True, but I think for the purpose of the stamping out of this disease the local authority should be under the supervision of a representative of this body; in fact I think in dealing with this disease at the commencement there should be several inspectors located in different parts of the country and having control or supervision over the local authorities.

3408. (*Professor Brown.*) You consider it a matter of considerable importance to be perfectly accurate in the diagnosis of the disease?—Yes, I do.

3409. And you have told the Committee what symptoms are to be met with in the early, and some of those which are found in the latter stages of the disease?—Yes.

3410. Have you made any experiments in regard to the progressive rise of temperature?—Yes.

3411. What is the temperature which is reached when the fever is fully developed?—A temperature of about 105 to 106.

3412. Have you examined the normal temperature of the pig to any extent?—Yes.

3413. What do you take to be the range?—From about 102½ to 103.

3414. There is an impression, is there not, among veterinary professional men that a temperature of 103 in a pig would indicate fever?—Yes.

3415. Which impression from actual observation of yourself and others is a mistake?—Yes, certainly.

3416. We cannot begin safely to reckon a rise of temperature until the temperature is above 103?—No.

3417. Have you had opportunities of observing the number of respirations?—Yes.

3418. What do you take to be the range of breathing?—The respirations will vary probably from something like 20 to 30.

3419. Thirty is not an uncommon number?—No.

3420. (*Mr. Stephenson.*) Is that the normal?—Yes.

3421. (*Professor Brown.*) I am speaking entirely of the normal at present. Is it your impression, from what you know of the views of the members of your profession, that 30 breathings in a pig would be looked upon as an indication of disease?—Some would look upon it so.

3422. At the same time you cannot consider that the respiration is really accelerated or hurried until it reaches above the number of 30?—No; of course, a good deal depends upon the condition of the pig.

3423. Have you ever found it as low as 15?—No, I do not remember to have found it so low.

3424. Have you ever noticed a pig when it is asleep?—Yes, I have.

3425. Have you counted the respiration under those circumstances?—No, I have not.

3426. I think in the event of your having done it you would have found that it is sometimes as low as 15, and from that up to 25 or 30. You have had opportunities of watching the disease from the moment of infection to extermination?—Yes.

3427. And, therefore, your knowledge of the symptoms and the morbid appearances is derived from actual observations of your own?—Yes.

3428. Have you ever met with an instance in which a number of animals were implicated in an outbreak of swine fever without some degree of discoloration of the skin?—No.

3429. Is there anything peculiar in the colour?—It is peculiar perhaps in the brick-red character of it; and another point in the presence of little flea-bitten spots, which appear every now and again upon the skin and from which the cuticle desquamates.

3430. Have you found any difficulty in distinguishing the discoloration in swine fever from the discoloration from gastric irritation?—I should not like to rely upon that as a differential character.

3431. Have you observed any difference?—Yes, I think in those cases where the redness of the skin arises out of gastric irritation it is not so distinctly of a brick-red character as when it arises from swine plague.

3432. (*Mr. Carrington Smith.*) Brick red?—A brick-red character; a deep red.

3433. (*Professor Brown.*) On what indications would you rely in your *post-mortem* examination?—There are two conditions upon which I think reliance may be placed; one is where we have the button-shaped eruption in the intestine, and the other is where we have the general diffused croupous condition of the mucous membrane.

3434. That kind of exudation which is sometimes described as diphtheritic?—Yes, I think those are the two conditions, and the only conditions on which a definite opinion can be formed.

3435. In the absence of those indications—the complete absence of them—and the presence of mere indications of congestion or of an inflammatory state, would you be satisfied to say that the animal was suffering from swine fever?—No.

3436. Then I understand you to mean that unless it can be demonstrated that there are either those button-shaped ulcers, or the croupous exudation, you would not condemn the animal as suffering from swine fever?—No.

3437. Is there any disease of the lungs?—Yes.

3438. What is the peculiar character of that condition?—I do not think there is anything peculiar about it; that is to say I could not distinguish between the nature of the change in the lung as presenting itself in swine fever from an ordinary case of gray hepatisation or broncho-pneumonia.

3439. But if you take the earliest stage where you have those dark red patches with depression and a fleshy condition, if one may so call it, do you look upon that as characteristic of swine fever?—No.

3440. Then I understand you to say that from your experience there is no condition of lung apart from the condition of disease which you described as occurring in the intestines which would satisfy you of the existence of swine fever?—No, none.

3441. You said in reply to a question in your examination-in-chief that the local inspectors you thought should be paid by the Board, but I apprehend that you would consider the local inspectors—that is to say, the inspectors of local authorities—should be appointed and paid by the local authority, and only paid by the Board when they are employed by the Board in doing any work for them, as they have been employed in cases of pleuro-pneumonia?—Yes.

3442. You would not expect the Board that is to say to appoint inspectors all over the country when there are a number of inspectors already appointed by the local authority?—No.

3443. In reference to the question of transmitting morbid parts there would be no difficulty, I apprehend, in the Board providing proper apparatus which could be absolutely sealed and transmitted without danger?—No difficulty, I think.

3444. So that there is absolutely no risk whatever necessarily attendant upon the transmission of those morbid specimens from any part of the country to London?—I think there is no considerable risk—I mean to say that the slight risk which would attend it would be worth running.

3445. It should be taken into account, should it not, that those specimens being sent direct to the college or some other convenient place, would not be likely to

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come in contact with any swine?—No, they would not.

3446. You said that the local authorities should order that the markets should be paved. Are you aware that neither the local authority nor the central authority have any power to interfere with construction?—No, I was not aware of that.

3447. Do you think such powers should be given?—I think so.

3448. You are not aware I gather that under the present arrangement paving can only be obtained in a roundabout way?—No, I was not aware of that.

3449. That is to say, the local authority make a regulation that a market must be washed with water in accordance with the orders of the Board; that washing with water I apprehend necessitates some kind of hard and waterproof paving?—Yes, to be effective as a precautionary measure.

3450. But you think that it would be advantageous in any further legislation that the central authority—at least, if not the local authorities, probably both—should have the power to order a particular kind of floor which in your judgment would be most fit for the purpose?—Yes, I think that is very necessary.

3451. Have you tried any experiments or are you aware of any experiments having been tried at the college in reference to protective innoculation by modified virus?—I do not just now remember whether any have been tried or not.

3452. Have you any reliance as a general system on that kind of protective innoculation?—No.

3453. You would not rest upon any such measure as a means of extirpating the disease?—No, I think it would be futile to do anything of the kind when the disease can be stamped out completely and kept out of the country.

3454. (*Mr. Shaw.*) You mentioned that the disease can be carried by air; might I ask at what distance you consider it could be carried by air?—I could not tell you.

3455. Is there any limit to it?—Yes, there must be a limit I think. My own experiments which were undertaken for determining whether it could be so transmitted consisted in placing a diseased animal with a healthy animal under the same roof, only a few yards distant one from the other, with all the necessary precautions of course to prevent contagion through any other channel.

3456. Then you would not describe this disease as being of the nature of an epidemic?—It may and does assume epidemic proportions quite apart of course from atmospheric infection.

3457. But you do not think, for instance, that it can be carried by the air from one farm to another?—I have no reason to think that.

3458. The reason I ask the question is this: that in Ireland, the country that I represent, the idea among the farming community is that the infection is carried long distances by the air, and I should like your opinion on the matter, because it would be of very great value?—I have no experience to that effect. I have known herds of pigs affected by this disease at very short distances from other herds without the healthy pigs becoming affected, or without fresh outbreaks occurring.

3459. Would it not be possible for the infection to be carried by other agencies—birds for example?—I think anything may carry it.

3460. Or rats?—In the course of an investigation I made some years ago in the west of England, a man who had been engaged in dressing some pigs went home, and, without washing his hands, mixed the meal for his own pigs, and transmitted the disease to his herd. There is no doubt it may be transmitted by anything which may carry it—rats, and so on.

3461. Then you would describe the disease as being very infectious?—It is very infectious.

3462. And the virus as you say lives for a considerable time?—Yes.

3463. (*Mr. Carrington Smith.*) We understood you to say that the disease might be communicated by the medium of food; I take it that you meant contaminated food?—Certainly.

3464. Not by simply unwholesome food?—No.

3465. You have laid considerable stress upon the outward eruption; do we understand that you consider that discolouration and eruption of the skin is general, but not quite universal?—I never saw a case of swine plague in which the skin was not more or less reddened.

3466. Not in case of sudden death?—Not in swine plague. Pigs affected with swine plague do not die suddenly—they are generally several days and very frequently weeks before they succumb.

3467. They do not as a rule die suddenly, but occasionally they do, do they not?—Not within less than perhaps two or three days; I think that is the shortest time.

3468. Then in case of a pig having, say, eaten its food up to the time of being seized with sudden illness, and death resulting in the course of an hour, you would not think that that would be likely to be swine plague?—No, I should say it was impossible.

3469. Are diseased animals generally thirsty?—Yes.

3470. What length of time do you think the disease is in its incubation?—The shortest period in my experiments, I think, was three days. I think I put it at from three to eight days; and I think I gave five as the average.

3471. What is the longest?—About eight I think.

3472. You spoke of the normal temperature of the pig being 103 degrees; it struck me as a layman that that was very high. Is there anything analagous to it in cattle or sheep—I mean in the height of the temperature? What is the normal temperature in cattle; I am ashamed to say I do not know?—It is about 101 to 101½ in cattle. The pigs temperature is high—102½ to 103.

3473. What organs would you transmit for examination by the central authority?—Simply the large bowel.

3474. Only the bowel?—Yes.

3475. Not the lung?—No.

3476. Nor the heart?—No.

3477. Nor the stomach?—In some instances the stomach might be sent. In some instances the stomach gives marked evidence of the disease, and it might be desirable when disease is presented by the stomach to send it too.

3478. When it was plainly affected?—Yes.

3479. You spoke of a button-shaped eruption?—Yes.

3480. Do you mean an internal eruption or a button-shaped eruption on the skin?—On the intestines.

3481. Then the eruption on the skin does not take the button-shape?—No; the eruption on the skin is more of a rash in some instances,—it presents the form of vesicles and desquamation.

3482. Which might be button-shaped vesicles?—No, the term "button-shaped" is generally understood in the profession to mean a little raised rounded excrescence upon the intestine like a flat button.

3483. Then when you used the two words with respect to the cuticle of "rash" or "eruption," did you distinguish between them?—Yes. By a rash I understand a redness of the skin; by eruption I understand an elevation in the form of a papule, or a vesicle, or exudation.

3484. An excrescence?—An excrescence which may develop into vesicles or not or may die down again.

3485. Something has been said about the conditions

of registration; as I understand you, you intended something similar to the registration of cow sheds?—Yes, something similar to that.

3486. Would you mind describing the exudation in ordinary language such as non-veterinaries might understand?—In what part?

3487. From the bowels?—The exudation is really the button-shaped mass; that is to say we have an inflammatory exudate or an inflammatory product thrown out which concentrates itself at certain points and forms a raised button-shaped mass.

3488. On the outer surface of the bowel?—On the internal surface of the bowel. It is sometimes visible, and may be felt on the outer surface.

3489. Then the button-shaped eruption would not be discovered until the bowel was opened and turned inside out?—An expert would discover it, but an ordinary observer would not.

3490. Pigs are very liable to lung disease, are they not?—Yes, they do suffer considerably from lung disease through various causes.

3491. Is it not a fact that a great many pigs, after slaughter, are found to have their lungs more or less consolidated?—Many of them; they suffer from parasitic lung disease, from tuberculosis, and from ordinary pneumonia.

3492. What kind of floor paving would you recommend in cattle sale yards and markets, supposing the authority had control over the pavement?—I think concrete would make a good pavement.

3493. Impermeable?—Yes.

3494. I am a farmer myself, and I may mention that the great objection to a smooth pavement is that it is very slippery and dangerous for cattle to walk upon. How would you get over that difficulty?—It need not necessarily be smooth. I notice that there are furrowed concrete pavements.

3495. Rough?—Furrowed.

3496. And not permeable, of course?—Not permeable.

3497. (*Sir Jacob Wilson.*) When did you first begin to devote your attention to swine fever?—I think it was in 1874 or 1875 that I began in earnest.

3498. Previous to that you had had your attention drawn to the subject?—Yes.

3499. In fact, I presume that you have known something about the subject since its first introduction into this country?—I do not know exactly when it was introduced, but I apprehend that it has been in this country for generations. So far as I am aware, there is no reason to think that it is in any way a modern disease.

3500. In the very early stages, did you know the disease as typhoid fever in swine?—Yes.

3501. Have you noticed any difference in the appearance or symptoms of the disease at the present time as compared with the earliest period when your attention was drawn to it?—No; it is just now, I think, what it was when I first became acquainted with it.

3502. Speaking generally, and comparing it with other diseases, do you consider that it is a disease easy of detection?—Yes, fairly so; that is to say, given a number of pigs affected by the disease, and the general symptoms which it usually presents, it is fairly easy of detection.

3503. Does your answer apply to the living animal?—To the living animal when the disease is well established.

3504. Your experience in detecting the disease extends over a period of 20 years?—Yes.

3505. Would you think it easy of detection by the ordinary veterinary practitioner of the country?—No, not unless he had had some considerable experience of it. Not only so, but I might say that with an individual case, or one or two cases of sickness, the pigs might be suffering from swine plague and it might be difficult even for an expert to say what they were suffering from, generally speaking. We would take our cue from the fact that a number of animals had become affected at one and the same time, and that the disease was spreading from one to another; then, perhaps, we should have some information with regard to swine fever existing in the neighbourhood; and all those facts together would govern us or guide us in forming an opinion.

3506. Then, in satisfying yourself as to the existence of the disease, you would require to be fortified with the history and surroundings of the case?—It would be very desirable to be so fortified.

3507. But would you be absolutely satisfied in your own mind without a *post-mortem* examination of some of the animals?—No; I should not with certainty say that it was a case of swine plague unless I had a *post-mortem* examination.

3508. In the face of the difficulties of detection by the ordinary veterinary practitioner, would you consider that the inspection at the port of embarkation would be a sufficient guarantee that disease did or did not exist in a cargo of swine?—In the event of a number of pigs being sent to this country, should I consider it sufficient to guarantee the absence of swine plague that the port inspector should say that swine plague was absent? Do I understand that to be the question?

3509. Yes, at the other side of the water?—No, I should not.

3510. Have you any reason for knowing whether the disease exists generally throughout other countries of Europe?—I believe so.

3511. Have you had any experience in treating swine fever?—Yes.

3512. Have you had many cases of recovery?—I think, in my own experimental cases, I had one.

3513. What percentage would that be?—I am sure I cannot tell; perhaps one in 10.

3514. Therefore I gather that in the event of an outbreak you would not recommend any form of treatment?—No.

3515. (*Mr. Stephenson.*) Over and above the very valuable experiments you have carried on with swine fever, have you seen many outbreaks in the country?—A large number.

3516. Naturally acquired cases?—Yes, large numbers.

3517. Is there any difference between the symptoms of the naturally acquired cases and those of your experimental cases?—Not at all.

3518. No difference?—No.

3519. The symptoms do vary considerably, I believe?—They do.

3520. You say that you have never seen swine fever without some eruption, more or less?—Never.

3521. Is eruption of the skin of the pig not a very common symptom of all diseases to which it is liable?—Yes. I should not like to say an eruption, perhaps, in the proper sense of the term, but a rash, a redness of the skin.

3522. That is common to all diseases?—It is very common to many diseases.

3523. Particularly to gastritis?—Yes.

3524. Will you kindly tell me, over again, what you think the *post-mortem* lesions of swine fever are?—The most marked and reliable lesions are the button-shaped eruption and the croupous exudate, and those are the only two signs upon which I should rely, that is the only difference that I should recognise.

3525. I think these button-shaped eruptions want explaining. Is it not a fact that these button-shaped growths which you find are found only in the very latest stage of the disease?—The actual button-shaped condition represents an advanced stage of the disease. There are those conditions which lead up to it which are obvious in the earlier stages of the disease, that is to say the follicular eruption in which you have a little raising of the isolated follicles, and the forma-

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tion of pea or shot-like bodies scattered over the internal surface of the intestines. Later on they present a grey, cheesy condition, and from them you obtain the button-shaped eruption growing or spreading from the centre to the circumference.

3526. Before you have the button-shaped eruption upon the bowel, have you not a sunken black-coloured ulcer of an irregular shape ?—No ; the condition precedent to the button-shaped eruption is a swollen condition of the follicle.

3527. You would not recognise these perfectly black, irregular-shaped, and deep ulcers in the ilioccecal portion of the bowel as swine fever ; you would wait to have the button-shaped or cauliflower eruption there ?—No. I should want the button-shaped eruption either actually existing or in one of its stages of development. The button-shaped eruption commences in a swollen follicle, and that swollen follicle begins to soften ; it changes to a small yellow nodule, and from that centre it enlarges itself and develops the button-shaped eruption.

3528. But previous to that you must have seen many cases in which there was an irregular-shaped black ulcer spread pretty freely all over the large intestine ?—I have only seen the pigmented ulcers, when we have had the button-crust sloughing away, and leaving behind a pit or depression. I look upon those deep cavities which you sometimes get as the result of the sloughing away of the button-shaped mass.

3529. Now as to the *post-mortem* lesion of the lungs ; you say that you do not recognise any difference from ordinary diseases of the lungs ?—No.

3530. We have been accustomed in the North to recognise a very important lesion in the lung, but they are not always present, that is an enlargement of a lobular portion of the lung ?—I look upon it as broncho-pneumonia, and I do not recognise any difference between broncho-pneumonia arising out of the poison or virus of swine plague, and that arising from ordinary causes, at least not to such an extent as would enable me to differentiate between the one and the other.

3531. Is it possible for a pig to die of swine fever without showing bowel lesions ?—I should say not.

3532. If you were told that a number of pigs died one after another while eating their food without showing any symptoms and that that was swine fever, what would you think of that ?—I should say it was not.

3533. Then in your opinion swine do not die suddenly of swine fever ?—No.

3534. Nor without developing symptoms during life and *post-mortem* lesions afterwards ?—That is so.

3535. I should like to be quite sure about the viscera that you would send up to the central authority, supposing them to take it over. I think you said you would only send the large intestine ?—That is so.

3536. Is it not possible to find evidence of the disease in other parts of the pig ?—It is possible to find evidence of disease, but not of any material diagnostic value in many organs of the body.

3537. What about the mesenteric glands ?—They are enlarged.

3538. Are they not always enlarged ?—Yes, they are enlarged.

3539. And may you not have all the lesions developed in the stomach, and not one of them in the larger intestine ?—No ; at least that is not my experience. I would not say it is not possible.

3540. Is it not possible to have a certain portion of lung enlarged and consolidated, and very like a pleuro-pneumonia lung without any other lesion ; and that in swine fever ?—No, I think not ; at least that is my experience.

3541. Now I want to ask you about endocarditis. Have you seen much of that in your investigations ? —Yes, large numbers of cases.

3542. Do you think that that is the disease which is now spoken of as swine erysipelas or rouget ?—I should not like to say it is.

3543. Would you include endocarditis with swine fever ?—I should not look upon it as a necessary lesion of swine fever. It might be and sometimes is, I know, a complication.

3544. In your experience is this disease of endocarditis or swine erysipelas a very infectious one ?—I am given to understand so.

3545. But you could not say positively ?—I should not like to say anything about it ; in fact I am not clear that it is a distinct disease.

3546. (*Mr. Wardlaw Ramsay.*) I understood you to say that you thought that a system of licensing, or rather of registration, was desirable. Did that refer to the premises, or to the owners ?—To the premises on which pigs were kept.

3547. Would you think it desirable to extend that to dealers and to require them to take out licenses ?— Certainly, and if you could register them as dealers, I think it would be desirable. While registering the whole of the pig-keeping people you might at the same time have your special register for dealers.

3548. You do not anticipate that there would be any difficulty in most parts of the country in carrying out a system of compulsory licenses ?—I think not.

3549. In fact it would be no more difficult than the requirements as to dogs ?—No.

3550. With regard to infection, in the event of the Board of Agriculture directing all the operations connected with the extermination of swine fever, what would you suggest should be done, in addition to restrictions as to movement, with a view to prevent the spread of infection in what might be called minor ways ? I ask this question because one or two witnesses have stated that they consider animals and human beings as very frequent sources of the spread of infection—animals and birds—pigeons were mentioned by one witness, and dogs by more than one ?—I think that is quite likely.

3551. Also men, and especially professional castrators ?—Yes.

3552. Would you propose to take any steps so as to restrict the traffic of those castrators ?—I do not know that you can. Of course, in dealing with this matter, if you undertake to slaughter and to compensate, then you would of course forbid the entrance of castrators or anyone else to the premises where the disease existed. That would be part of the general administration of the measure.

3553. Of course, I did not imagine that you could prevent the entrance of pigeons ?—No ; but it is to be presumed that, having slaughtered your contact pigs and your diseased pigs, you would then immediately go on to carry out disinfection and render it impossible for the conveyance of infection ; presumably you would have destroyed the virus.

3554. I understood energetic measures were taken in connection with foot-and-mouth disease in Kent and elsewhere, and I want to know whether you consider it necessary to take such energetic measures for the prevention of contagion by boots, and so on ?—I should take all the necessary measures for preventing contact with the seat of contagion.

3555. As to the danger of spreading infection—I base this question upon previous evidence—in the event of floors of pig-sties being excavated, and the earth removed for the purpose of disinfecting, would you consider it sufficient if that earth was mixed with quicklime and thrown on a dunghill ?—Firstly, the earth should be removed or thoroughly saturated with some disinfectant, and then it should have a coating over it of quicklime and sand, and then be repaved.

3556. Would you consider that the heat produced by the ordinary process of the fermentation of manure would be sufficient to kill the virus ?—I should not like to give an opinion on that.

3557. Therefore the use of manure from a diseased pig would not be safe ?—It would have to be very

carefully disposed of; it should be placed somewhere away from line of traffic, contact with any ponds or streams, or anything of that sort where the virus could be carried away into other places.

3558. May I ask whether the virus of swine fever is capable of being communicated to human beings?—I can only say that I have inoculated myself, and lived in an atmosphere where the swine fever virus has existed in large amounts, and I failed to infect myself.

3559. Then would you consider it in any way dangerous for a house to be built, say, close to the sty where a large number of diseased pigs had been buried?—I should not consider it dangerous in fear of swine plague being transmitted to the occupants. It would not be a good sanitary measure.

3560. You would not choose it for a residence?—No, I certainly should not.

3561. Then with reference to infected areas, would you propose that the central authority should settle what the delimitations were to be?—Certainly.

3562. But I presume subject to local conditions and information derived from the local authority?—I would leave everything of that kind to the central authority. They have now a large experience of the requirements of such cases to guide them.

3563. In connection with asking any information from the local authority?—I should prefer that the central authority should not be in any way fettered or restricted.

3564. With nothing but the map in front of them?—That is all.

3565. But you would advise the use of the map?—Certainly.

3566. Do you attach any value necessarily to geographical boundaries?—No, I do not know that I do.

3567. Except, perhaps, for the fact that geographical boundaries are better known?—Yes, as a matter of convenience.

3568. That is the only advantage?—That is all.

3569. Disease has no respect for geographical boundaries?—I think not.

3570. (*Sir William Kaye.*) Are you aware that the Government veterinary inspectors at the ports of Ireland have power, in case they discover a pig infected with swine fever, to detain all the pigs that they consider come within range of the infection at the port?—I was not aware that they had that power.

3571. Now, do you not think that a highly-intelligent and quick-witted people would be more cautious as to the pigs they would send to the port for transit if they were aware of that fact?—I would not leave such a possibility of an accident open. I would not allow any pigs to come from Ireland here until such time that the disease was stamped out in both countries.

3572. That is another point altogether; but is not this a safeguard so far as it goes?—No, I do not think it is a safeguard at all.

3573. You do not think it is?—No; because I might inspect a herd of pigs to-day, and report them healthy, and in four days' time it is just possible that a large number of them might be diseased.

3574. But do you not think it is an important power; and, as we have these Government inspectors at the ports, is it not important that they should have the power?—Certainly.

3575. (*Professor Brown.*) I believe that, in testing the infectivity of the disease to the human subject, you shut yourself up with a lot of diseased pigs?—Yes; I occupied not only the pig-sty, but I had a lot of the excrement brought into a close room, and I confined myself in with it. One of my assistants became accidentally inoculated (he did not suffer from swine plague, however.) I inoculated myself.

3576. You inoculated yourself intentionally?—Yes.

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3577. There are one or two points in reference to the lung lesions which I should like to bring out clearly, because it is of immense importance that we should have the advantage of your experience in making quite plain what you have found to be the case in the experimental operations which you have carried on. You find congestion of the lungs?—Yes.

3578. Is there anything remarkable in that in any infective fever?—I do not know that there is.

3579. It is a condition which you would expect?—Yes.

3580. Have you found in cases which are convalescent consolidation and caseation?—Occasionally caseation.

3581. Is there any catarrhal condition of the pig during the progress of swine fever?—Yes, there is a discharge from the nose and a cough, the result of broncho-pneumonia.

3582. I was going to say, under those circumstances it is not remarkable that the catarrh develops into what is called catarrhal or broncho-pneumonia, and, as a common result of broncho-pneumonia, you get caseation?—Yes.

3583. And in some parts fibrous deposits?—Yes; you get grey hepatisation and consolidation of the lungs.

3584. You get all the results of broncho and catarrhal pneumonia?—Yes, precisely.

3585. And if, therefore, a specimen of the lung was sent to you in that condition, and you were requested to certify that the animal from which that lung was taken was subject to swine fever, or your opinion on the subject were asked, what would you do?—I should say I could not tell by the lung lesions whether swine plague had existed or not.

3586. You would decline from those lesions to give any opinion as to the existence of swine fever?—Yes.

3587. But you would give the disease a name?—Broncho-pneumonia.

3588. There are complications in all infective fevers, I apprehend?—Yes.

3589. In both man and the lower animals?—Yes.

3590. And if you find lesions in the glands during a condition of things in which the whole circulation is more or less poisoned with ptomaines and extractive matters, you would not think it remarkable that there are morbid conditions in various parts of the body?—No, it is a necessary result.

3591. But as a teacher, in speaking of the symptoms of the disease, you are probably in the habit of pointing out symptoms which are common to all sorts of diseases?—Yes.

3592. And then indicating those which especially mark the particular effects of the disease you are considering?—Quite so.

3593. And you have given us your experience with regard to the characteristic symptoms and morbid lesions in the swine fever?—Yes.

3594. (*Mr. Stephenson.*) I would like to put this matter of the condition of the lungs again before you, as it is a very important part of this inquiry, in my opinion. If you found the substance of both lungs affected as Professor Brown has described to you, you would not attach any swine fever ideas to that?—No.

3595. But if you found one portion, the anterior portion, say, of one lung solid, adherent to the walls of the chest, with a yellow exudate in the thorax, only one portion of one lung, what would you say to that?—I should draw no inference from it, beyond that the changes were those of pleuro-pneumonia.

3596. You would not be suspicious even then of swine fever?—Not at all.

3597. Have you ever seen that condition of lung?—Yes, frequently.

3598. Only one lobe of it?—Yes, one portion of the lung.

3599. With a yellow exudate in the thorax?—Yes.

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where the lung has become solid, and a little friction has excited inflammation in the pleura, and it has become adherent.

3600. In fact, a piece of lung very much like a pleuro-pneumonia lung in cattle, remarkably like; if you got it there, what would you say?—It would be pleuro-pneumonia.

3601. Would you attach no importance to it?—Not the slightest. I should simply say you have got a case of pleuro-pneumonia, or broncho-pneumonia, as the case might be.

3602. (*Mr. Shaw.*) You stated that you would close the English ports to Irish pigs in the event of an effort being made to stamp out swine disease?—Yes.

3603. Would you do so because you have any reason to believe that disease is imported from Ireland into England?—Inasmuch as swine fever exists in Ireland, I conceive that it is very likely that swine fever is imported from Ireland to England.

3604. Are you aware that about 99 per cent. of the hogs which come over from Ireland are for immediate slaughter?—No, and I do not think that it would render it less desirable if even they are.

3605. In what way then would you say that pigs which are delivered into the abattoirs, and into the railway cars, could infect a district?—During the time that the operation of stamping out the disease is going on I think it should be going on in Ireland at the same time, and that there should be no interchange of stock between the two countries.

3606. Is that not a very drastic measure; is it not a very serious thing to affect the food supplies of the people for even a month?—I think the food supply of the people would be affected in a very trifling degree.

3607. Considering, from evidence which has been put before us, that something like half a million of pigs per annum come across the Channel into England from Ireland, I think it would be a more serious matter than you contemplate?—But it is a very serious matter when you come to have 40,000 or 50,000 pigs dying annually from this disease.

3608. Yes, we all admit the importance of the matter, but surely that is a very stringent thing?—It is rather a matter of political economy, I think, than one of sanitation.

3609. Two witnesses, from Wiltshire and Gloucestershire, respectively, one of them a large importer, allege that they do not know of disease in Irish pigs?—I cannot contradict it, but I should certainly say, so long as you have disease in Ireland, and inasmuch as it is possible, even with the closest inspection, for disease to evade the best expert in the world, therefore they should not come over.

3610. (*Professor Brown.*) In regard to the effect on the food supply of the people of stopping the importation of pigs, would there be any great difficulty in sending pigs from England to Ireland, or from Ireland to England, dressed ready to be cooked or cured in various ways?—I should think not.

3611. (*Mr. Shaw.*) Is it not possible for the dead flesh to carry the infection; supposing the pigs were slaughtered over on the other side, at Waterford we will say, and then come across Channel, would the dead flesh carry the infection?—I apprehend that you would not slaughter diseased animals for market purposes.

3612. Do you not see that a certain number of hogs are ripe for the knife every day in Ireland, and they have got to be got rid of, and one of the ways in which that might be done is to slaughter in Ireland; then they would come in a dead state into this country; would that be open to objection?—I do not think so. I do not think there would be any risk, especially if you took care to send us over no animals that were obviously diseased.

3613. (*Sir William Kaye.*) Do you look upon it more as an economic question than anything else?—I think a few thousand pigs, so far as our meat supply is concerned, is a mere bagatelle.

3614. Do you call half a million of pigs a bagatelle?—I do.

3615. (*Sir Jacob Wilson.*) Do you consider that there is any probable risk of conveying disease from a dead dressed pig to a living pig?—No, I do not think there is any risk.

3616. (*Mr. Carrington Smith.*) It would have to pass the sanitary inspector?—Quite so.

3617. (*Mr. Shaw.*) Are we to infer from that that the infection is confined to the hair; that it is being carried on the hair and the intestines, and their contents?—In the act of dressing and scalding, you strip the skin of that which contains the contagion, namely, the cuticle, assuming the pig to have died, or to have been destroyed while suffering from the disease. But I apprehend that it would be impossible for pigs suffering from swine plague to be sent here from Ireland as dressed meat for the market, under ordinary care on the part of the central authority there.

3618. (*Sir Jacob Wilson.*) I take it the same difficulties would apply to pigs killed and dressed in England as to pigs killed and dressed in Ireland?—Quite so.

3619. (*Mr. Shaw.*) Would it not practically mean that you should close all the counties in England to each other in addition to that; that it should be an all-round movement; that you are not going to close Irish ports because you imagine there is swine fever in Ireland; you must close every county?—You must restrict movement wherever the disease prevails.

3620. You would be for universal restriction on movement in the stamping-out process?—I would leave it entirely to the central authority; a good deal depends upon circumstances and conditions, as to what might require to be done.

3621. Supposing it was thought advisable to restrict the movement generally all over the kingdom, what would you say?—The benefit of that was shown between 1879 and 1884, when the foot-and-mouth disease prevailed, and when swine plague was at its lowest ebb.

3622. But that restriction would only have been in force a very short time?—Still it had the effect which we desire to produce.

3623. But supposing it came about, it would only be for a short time?—That is so.

The Witness withdrew.

Mr. George Newsom, called; and Examined.

Mr. George Newsom.

3624. (*Chairman.*) You are, I think, inspector of two local authorities in Ireland?—Yes.

3625. Would you just mention what authorities they are?—Rathdrum and Shillelagh.

3626. Boards of guardians?—Yes.

3627. Are you inspector for a county also?—No, not for a county, I am only inspector to the boards of guardians.

3628. Just tell us then what county they are in, Wicklow, is it not?—My districts are in three counties. The Rathdrum Union is altogether in County Wicklow. The Shillelagh Union is principally in County Wicklow, but embraces small portions of the counties of Carlow and Wexford as well.

3629. It is what we call a divided union?—Yes, but practically it is in the County Wicklow; there is only a very small portion of Carlow and Wexford included.

3630. You are a veterinary surgeon yourself, I believe?—Yes.

3631. In the capacity of inspector you have naturally given a great deal of attention to the subject of diseases of animals, including swine fever?—Yes, I have seen a great deal of it unfortunately.

3632. Will you, in the first instance, tell us what your view is as to the character of the disease, and what the symptoms are that you have observed specially?—As regards the symptoms, the first that I have found to be noticed in animals when they become affected is that they immediately stop feeding. Then I have found the disease take on, if I might say, two characters. In some cases you will have a very acute attack of the disease, and very shortly after the animal becomes attacked, as a rule it will turn red, or in some cases a sort of purple colour about the ears and underneath part of its body, and the inside of the thighs. I have not found that invariably the case, but it is so in the majority of instances. In the first stages of the disease there will frequently be constipation of the bowels, and after a short time in acute attacts you will get diarrhœa. The diarrhœa will become of a yellow colour after some time, and it will be very offensive, and ultimately the fæces will pass from the animal involuntarily; you will see the animal standing there and the fæces running from it, without making the slightest attempt to raise its tail, and evidently not knowing that it is coming away at all. That I consider to be a very diagnostic symptom of the disease. Also a weakness, a sort of paralysis of the hind parts that commences from the loins backward, and when the animal moves it moves with a staggering gait with its hind legs, and it will ultimately go on to paralysis, so that it will not be able to get up. There is generally a great thirst, and I have noticed that the animals will prefer to drink dirty water, or anything like that to clean water. I especially notice even when they are very thirsty in the majority of cases that they will not drink milk; they prefer dirty water to anything else. Those are the principal apparent symptoms. Then in the first stages of the disease you always get a rise in the temperature, and ultimately where the disease runs its course, quickly, before the animal dies the temperature will fall, the animal will become comatose.

3633. You have now chiefly described what may be called the more acute symptoms?—Yes.

3634. There is also a milder form?—Yes, I have frequently found a sort of chronic form of the disease, and I have found it very difficult in those cases to come to a decided opinion as to what disease the animal is suffering from. I have known animals to last for a very considerable time with it. The principal symptoms that you will see in those cases will be that they will not feed—at least to any extent. Of course, in the mild form of the disease they will take a little food, but they will not feed to any great extent, and they will gradually waste away; and in some cases, after the disease has existed for some time, there will be more or less peeling off of the skin—a sort of scaly peeling off of the skin. I find in those mild forms they are not so likely to change colour as in the acute attacks.

3635. Now, to what do you chiefly attribute the spread of the disease?—My experience of it in my districts has been that the spread of the disease is principally owing to the traffic through fairs. I have many and many a time, if there was a fair in a certain town, had outbreaks of the disease in the neighbourhood shortly after.

3636. Are there any other minor causes?—I believe I have had several outbreaks of the disease amongst young pigs where it has been carried to them. At least I could not account for the disease in any other way than that it has been carried to them by men who go about operating on them.

3637. (*Mr. Carrington Smith.*) Castrators?—Yes.

3638. But the most frequent cause is the exposure of the swine in fairs?—Yes. Another cause that I have found is the bringing of sows to the boar. In the country, when they want to bring a sow to a boar, a great many people who own pigs in the country districts, and especially in the mountainous districts, have very little land; some of them have not got a horse at all, and they tie a rope round the sow's leg and drive her along the road before them, and if there is any disease in the neighbourhood then they are very likely to take it by passing by the houses on the road. I have often suspected that perhaps there might have been disease existing on the farm where the boar was standing, and that it was concealed. I have frequently had cases of outbreaks of disease in places where I have heard that the sow has been recently sent away to the boar, and I could not account for it in any other way. Those are the three principal causes that I have observed—the fairs, the sows going to the boar, and men operating on the pigs carrying it in their clothes. Another thing that takes place in my district is that one of these men who go about the country castrating pigs will go to a certain town on a certain day, and the people all round that place will bring pigs there and have them castrated in a yard. I think that the disease is spread in that way.

3639. (*Chairman.*) What has been the policy pursued in those two unions in regard to compensation?—We have only slaughtered the pigs that have been affected, and we have paid half the value.

3640. You have not slaughtered the contact pigs?—No, we have never slaughtered any pigs except those that are affected.

3641. What has been the result of this policy; has it been successful in causing people to give notice?—Undoubtedly it has to a great extent been very successful in that way. There is one drawback about it; that I find people will not report their pigs as long as they think there is a probability of their recovering, that is, when they are suffering from the mild form of the disease. If they get an acute attack, and the pig changes its colour, and they think that it is sure to die, they will run and report it at once; but I have known cases in the mild form of the disease where I have had reason to believe that they have concealed it for a considerable time in the hope that the animal would recover, and then when they have found it was not likely to recover they would report it to get the compensation. Occasionally I have had reason to believe, too, that in a place where a man would have a great number of pigs, if he found one pig get ill, he hit it on the head and tried to dispose of the others; of course without reporting them. But, as a rule, the policy has been successful, I may say, and of course these are exceptions that I am speaking of.

3642. Although dirt is not the cause of the disease, I suppose there is no doubt that it tends to prolong it?—Certainly; it tends to spread it and to propagate it to a great extent. I have no doubt at all about that.

3643. Have you ever considered whether it would be possible to take any measures by the action of local authorities to enforce more adequate sanitary regulations in regard to pigsties?—I think it would be difficult to do so. Some of these pigsties through the country are in a very bad state; they are just an old shed laid up against the wall of a house. You know the majority of the people keeping pigs in my district are very poor people—labourers and widows, and that sort of thing. Everybody keeps a pig, and the great majority of the pigs are amongst the very poor people. Unless the local authorities could take it up and build sties themselves, I do not think it would be possible in any other way to make much improvement in them.

3644. Now you have told us that the principal cause of the disease is the exposure in fairs of swine which are suffering at the time; those swine in many cases, probably in most, have come out of neighbou-

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ing districts, have they not?—In some cases. I believe it is very often the case that when a man has disease amongst his pigs he will not sell them in a fair near him; he will take them a good way off where he will not be known. I have known that to be done several times. I do not mean to say that the disease is so much caused by exposing swine that are actually affected, as by exposing swine that have been in contact with affected ones.

3645. That being so, the jurisdiction of the local authority is entirely insufficient to deal adequately with those circumstances, is it not?—I think it is. I do not think the local authority can undertake the matter successfully at all; that is my opinion about it.

3646. What suggestions would you make in order to cope more successfully with this disease?—The first thing I would suggest would be that the management of it should be taken out of the hands of the local authorities; that is the first thing I would suggest. The next thing I would suggest would be that all animals which had been in contact with affected animals should be slaughtered, that is, on the farm or holding, the place, whatever it might be. I would suggest, as I say, that all animals that had been in contact with the affected animals should be slaughtered, and that there should be a surrounding area declared infected, and that there should not be any movement of animals allowed either into or out of it for some considerable time afterwards.

3647. How large would you make that surrounding area?—That would all depend on the circumstances. Perhaps in some cases there might not be a pig within a mile round.

3648. Would you make a large area; that is what I want to bring out?—I would include the surrounding townlands as far as possible. I do not think it would be necessary to make the area too large unless the place were very thickly populated, and there were a great many pigs in the neighbourhood. In that case I would certainly proclaim a large area, but in thinly populated districts I do not think it would be necessary to proclaim a very large area. I would certainly have all the holdings included in an infected area immediately surrounding the place where the disease existed. I certainly think that one of the most important steps would be to stop the fairs in the immediate neighbourhood of any place where disease existed. I think that would be one of the most effective measures of doing away with the disease or preventing the spread of it.

3649. Would you make any regulation with regard to the fairs and markets in the district, any special regulation?—Except to stop them as I say, to prevent the exposure of pigs, that there should be no public fairs or markets in the neighbourhood where the disease existed.

3650. Your policy then would be one of action by the central authority in regard to movement, slaughter, and compensation?—Certainly. I no not think the matter can ever be properly carried out, at least, that it ever will be properly carried out by the local authorities.

3651. And you believe that with that policy it would be possible to stamp out the disease?—I certainly think so. I have no doubt at all about that.

3652. You have no doubt about it?—I have no doubt.

3653. Because of course you see it is very important that we should get that clearly from you, that you are quite certain that it is worth carrying out these drastic measures, which would entail no doubt a considerable expense and inconvenience?—So far as my opinion goes I have no doubt whatever about it.

3654. (*Professor Brown.*) From your experience in outbreaks of swine fever in Ireland, do you think there is any great difficulty in dealing with the disease by regulations?—I do not think there would be if it were in the hands of the central authority.

3655. Is it your opinion that if proper compensation were given people would report the disease?—Yes, I think they would, except in very exceptional cases. There might be some exceptions.

3656. Probably these cases would not be more frequent than are in England?—I have no experience of it in England at all. I think the cases in which they would not report would be very exceptional.

3657. And that being the case there would be no difficulty in discovering the centres of disease?—I do not think there would.

3658. And you would therefore have full opportunity of applying the necessary restrictive measures?—Yes, I should think so.

3659. So that I think I may gather from what you say that in your opinion there is nothing peculiar in swine fever in Ireland which would at all prevent its being stamped out?—There is nothing that I know of. I do not see that there is.

3660. We have heard the expression very frequently to the effect that you will never stamp out swine fever in Ireland, but from your experience in Ireland you consider that that expression has no foundation?—I do not think it has. Even with the very incomplete measures that we have taken in the Rathdrum Union we have not had a case in it now for six months, and that is the first time for over seven years that there has been anything like that period without an outbreak.

3661. Have you any particular system in your mind for dealing with the disease, or would you leave that to be devised by the central authority?—Not any further than what I have already suggested.

3662. Nothing more than that?—I do not know of anything else.

3663. You would consider it, I suppose, advisable to take advantage of the services of local inspectors in Ireland?—As regards that matter, I think, that might be left to the central authority; whichever would be most feasible.

3664. In regard to the general principle the question is between the appointment of a certain number of veterinary surgeons to do the work over the whole country, or taking advantage of the services of the veterinary surgeons who already are employed in the country?—That is a matter that I have not considered at all. It has never entered my mind to look at it in that light at all. I should think that the same system that has been carried out with regard to pleuro-pneumonia would perhaps be the most effective.

3665. That is to say that the local inspectors should be employed when it is desirable to employ them, and when so employed they would be paid by the central authority for the work which the central authority orders to be done?—Yes, I should think so.

3666. Very much the system which has been adopted in this country with regard to pleuro-pneumonia?—Yes.

3667. And presumably also in Ireland?—Yes.

3668. Is there any particular morbid condition of the organs of the pig which you would accept as distinct evidence of the existence of swine fever?—*Post-mortem* appearances, do you mean.

3669. Yes?—The only evidence that I have relied on is the ulceration of the large intestines.

3670. What is the peculiarity of that ulcer?—In the first stages it commences more or less as a yellowish speck in my experience, and it extends then, and it has a peculiar yellowish ring round it I have found.

3671. That ring round is elevated above the membrane?—Yes.

3672. Have you heard the expression "button-"like" ?—Yes, I have.

3673. Do you think that is applicable to it?—Yes, I think it is.

3674. Button-like ulceration?—Yes.

3675. Have you met with another condition of the intestinal membrane which has been described as

croupous or diphtheritic ?—Yes; as regards ecchymosed spots on the small intestines, do you mean ? I have found that.

3676. I men a diffused deposit of a somewhat rough character ?—Underneath the membrane ?

3677. Hardly, on the top of it ?—A raising of the membrane; I have noticed that.

3678. Would you take that to be an indication of one form of swine fever ?—Yes, I would.

3679. Then there are two characteristic conditions; there is the croupous exudation ?—Yes.

3680. And the button-like ulcers ?—Yes.

3681. Have you formed any opinion as to the disease which you find in the lung being in any way indicative by itself of swine fever ?—I certainly think it would be difficult to form a decided opinion from it by itself.

3682. That is to say if you found a certain morbid condition of the lungs without any disease of the intestinal membrane, you would not call that swine fever ?—Well, I would have a good deal of hesitation in doing so, I think, in any condition of the lungs that I have seen. In those cases, I think, it might be accounted for as the result of other diseases.

3683. What would you call the disease which you have met with in the lung. If you met with it by itself without any suspicion of swine fever, what would you call it ?—As a separate disease, do you mean ?

3684. Yes ?—I think it might be the result of an old attack of bronchitis in some cases.

3685. Or broncho-pneumonia ?—Yes.

3686. But you would not consider that in itself as an indication of swine fever ?—I do not think I should without some evidence of the disease in the intestines.

3687. You never have done it probably ?—I have not.

3688. Have you met with any cases which you have reported as swine fever without the symptom of redness in the skin ?—Yes, I have certainly.

3689. You have met with the disease without any redness in any part of the animal's skin ?—I have.

3690. In those cases how have you succeeded in satisfying yourself that swine fever existed ?—Do you mean in its *post-mortem* appearance ?

3691. In any way ?—During the life of the animal, before the animal's death I take it as satisfactory evidence of the disease when you get the peculiar form of diarrhœa that I have alluded to, and the partial paralysis of the hind parts.

3692. You would take then that peculiar diarrhœa which you describe, and paralysis or loss of power of the hind quarters as sufficient evidence of swine fever ?—I would.

3693. And in the event of those animals dying or being slaughtered, would you in the ordinary course of things think it necessary to make a *post-mortem* examination ?—Yes, I would. I generally do make a *post-mortem*.

3694. But would you in those particular cases more especially than you would in ordinary cases ?—In the absence of redness of the skin I would.

3695. Have you in those cases found any of the characteristic lesions in the bowels ?—I have.

3696. In what part of the intestinal canal do you find them most constant ?—In the large intestines, but especially between the colon and the cæcum.

3697. And in the cæcum itself ?—Yes; in the cæcum itself principally.

3698. In describing the symptoms, you mentioned certain things which are not characteristic of swine fever; for instance, loss of appetite ?—Yes.

3699. And redness of skin ?—Yes; I have found the redness of skin.

3700. In other diseases ?—Yes.

3701. And constipation ?—Constipation.

3702. So that all those are mere ordinary symptoms, which may or may not indicate swine fever ?—They are. I have seen them exist in cases where the animals have died, and where I have had *post-mortem* examinations, and have been quite satisfied that swine fever did not exist.

3703. Exactly; in noting those symptoms, supposing that they do not go any further, you would not even probably suspect swine fever ?—Well, I would not conclude that it existed.

3704. Without something in addition ?—Without something more.

3705. Have you in every instance found loss of power in the hind quarters ?—Not in every instance, but very generally. Sometimes the animals will die before the loss of power comes, but in all cases where the disease exists for any length of time, I have invariably found it.

3706. For how long would you say the disease would exist before the loss of power in the hind quarters becomes evident ?—Well, perhaps for a week. I certainly do not think any animal would have it for a week or ten days without losing power in their hind quarters.

3707. That would, of course, depend in some degree on the acuteness of the attack ?—Certainly.

3708. In any case it would not occur for some days ?—I think they might possibly commence to lose the use of their hind parts in 48 hours after the commencement of the attack.

3709. That would be two or three days ?—Yes; two days we may say.

3710. You spoke of the great thirst, and you also mentioned, which is undoubtedly a fact, that they prefer water ?—Yes.

3711. Is that not a common characteristic in all kinds of fever ?—It is.

3712. But do you know it is the case with the human subject ?—Yes.

3713. That people prefer water to any other kind of liquid ?—Yes; I know that.

3714. So that the fact of the animal desiring water is an indication of fever thirst ?—Yes.

3715. What amount of rise of temperature have you noticed ?—I have noticed the temperature to go to over 106.

3716. Have you made any examinations of the temperature in the healthy pig ?—As far as I can make out the temperature of the healthy pig, I make it to be from 103 to 103·5.

3717. It is normally a very high temperature ?—It is.

3718. So that unless you got something considerably over, at any rate a good degree over 102, you would not call it a rise ?—I would not consider it indicative of a rise unless the temperature went to 104; at least, that is the way that I have been looking at it. Anything under 104 I do not consider anything of a rise.

3719. (*Sir Jacob Wilson.*) You stated to the Committee that you have had a large experience in swine fever ?—I have seen a great many cases of it.

3720. Have you seen it elsewhere than in the unions to which you are attached ?—No, I have not. I have never seen it except in those two unions. When I say that, I should add that I was for a very short time acting as temporary inspector in an adjoining union, in the Gorey Union. I had for about three weeks some experience there.

3721. Have you any returns by you showing the number of outbreaks in a given time in the unions under your charge ?—I looked them up roughly yesterday before I came away. I had not time to make a minute calculation, but I am satisfied that during the time that I have been dealing with the disease, which commenced in the latter part of 1885, and from that up to the commencement of the present year, I have had something like from 350 to 400 outbreaks between the two unions.

3722. Is it a fact that within the last six months no outbreak has taken place ?—That is the fact in

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one of the unions, in the Rathdrum Union; and there has not been an outbreak in the other union, I think, for very nearly three months.

3723. Is it part of your duty to trace the disease, or does that rest with the police authority, or with any other authority?—I always endeavour to trace it as far as possible, but I do not know that it is any part of my duty.

3724. Would it be a part of your practice to endeavour to find the origin of it?—Yes, it has been; for my own satisfaction I have done it perhaps more than anything else.

3725. Having ascertained that, do you report it to your guardians?—No; I have not done so.

3726. So that your local authority have no means of knowing from what source the disease comes into their jurisdiction?—No; they have not.

3727. Is it within your experience, or have you any great suspicion that this disease is brought into your union from some other union in the majority of cases?—I have no reason to think that it has been, because, except till very lately, our unions have never been free from the disease. They have never been free from the disease since I have commenced to deal with it, until within the last three months in one case, and six months in the other.

3728. Now, seeing that you have had no case of swine fever in Rathdrum Union for six months, in the event of another outbreak taking place would you consider it your duty to make any special inquiry as to whence it came?—Yes, I certainly should.

3729. Have you ever had any reason to believe that it came from the city of Dublin into your unions?—I do not think so at all. I do not think there is any traffic of pigs from Dublin into our unions; the traffic is all the other way; they go from our unions to Dublin.

3730. (*Chairman.*) And to Waterford, I suppose?—And to Waterford; that is the fat pigs, but, of course, they are not likely to spread the disease. It is the store pigs that do the damage.

3731. (*Sir Jacob Wilson.*) But given an instance of a fat pig having the disease, I take it that in his moving about or being transferred from one place to another, he would communicate the disease as easily as a store pig?—Of course he would in the fair, but I mean as carrying it to other unions. It would be very unlikely to do any harm in the unions it goes to, because it would be slaughtered immediately.

3732. I gather that you consider that you can in the majority of cases detect the disease from external symptoms when in an acute form?—Yes.

3733. In acute cases only?—In acute cases only. In some chronic cases of the disease I have found it very difficult to come to a conclusion about it; in fact I have been unable in many cases to come to a conclusion until the disease would spread; and would come to it in that way, by seeing other pigs take it from the one that was first affected in the place.

3734. And the same difficulty would exist in acute cases even among pigs at the port of embarkation?—Yes, certainly; but that is in the first stage of the disease, of course.

3735. I limited it to that. In your opinion one of the chief sources of the disease are fairs and markets?—Yes.

3736. Is it a fact that many of your fairs and markets are held in the open streets of the towns?—Nearly all. They are either held in the open streets or in an open field, either one or the other, all in an open space.

3737. And the means of cleansing and disinfecting those thoroughly in the event of an outbreak of disease would be very difficult?—Impossible in many cases. As a rule, there is never any attempt to cleanse them except by the people who own the houses adjoining. They sweep the stuff away.

3738. Another source of spreading the disease is by sows going to the boar?—Yes, I believe so.

3739. Is it within your experience that in many cases sows go voluntarily to the boar?—Yes, very often.

3740. So that disease might be spread without any intention on the part of the owner of the sow?—Certainly.

3741. Seeing that you consider that a further means of spreading disease is the castrator, would you think that it would be a fit and proper thing that such an officer should be licensed?—I do not know that that would do much good. I do not know that there would be much advantage in it.

3742. You do not attach, therefore, any importance to such a power?—I do not think so. I fancy that where the disease would exist in those case, it perhaps would be in the early stage of the disease and that it would not be known. I do not think men would have their pigs operated on if they knew they were suffering from disease at the time.

3743. For fear of losing the pig more probably?—Yes.

3744. Seeing that very few pigs recover, it would not be worth while having them castrated at all?—No, it would not.

3745. That would be the reason you would give, I presume?—Yes. That is a thing that I am not perfectly satisfied about. I have a strong suspicion of it being carried in that way, but I have not any direct proof of it.

3746. In the exercise of your duties as inspector, have you, in the event of an outbreak, made a practice of seeing the pigsties disinfected?—Yes, as far as possible I have.

3747. Have you in any instance caused them to be destroyed or removed?—No, I have not. I had no power to do that.

3748. Of what are pigsties in Ireland usually constructed?—Amongst the poorer class of the people they are very often built as a sort of shed against the end wall of the house.

3749. Is the structure of stone or of wood?—Very frequently of wood. I do not know exactly how to describe it. They are sometimes simply what we call wattles; stakes driven down and wattles put in and out.

3750. Not a very costly erection?—No.

3751. In the event of your having the power of destroying or removing these wooden or wattled sties with payment of compensation to the owner, would you think that a very proper precaution?—I certainly think it would be.

3752. Has it been the practice of your local authority to compensate for diseased pigs only?—Only diseased pigs.

3753. Is it your opinion that the pigs in contact are equally dangerous and liable to convey the disease?—I think so.

3754. Has it never been the practice of your local authority to compensate for pigs in contact?—It has not.

3755. Do you not consider it in your opinion a desirable thing that pigs in contact should be compensated for?—I certainly do.

3756. Have you ever recommended it to your local authorities?—I do not know that I have recommended it officially, but I have in other ways.

3757. Did it not appear to you that in paying compensation for diseased pigs only the danger still remained, and, therefore, it was throwing money away?—Certainly; and as a general rule the outbreak continued to spread from time to time from one pig to another till they were ultimately nearly all slaughtered, in most cases as diseased pigs.

3758. So that as a matter of fact instead of paying it all at once you paid the same amount—or not perhaps the same amount——?—No, they only paid half that way.

3759. May I ask was it in consequence of the payment being so much less for the diseased pig as com-

pared with the pig in contact that your local authority did not pay compensation except for diseased pigs?—I do not think it was so much for that reason as in the hope that the other pigs would not take it at all. I think that was the principal reason.

3760. Is it your experience that with a number of pigs together many do escape in the event of an outbreak?—In some cases I have found that one or two pigs in a number will take it, and that the rest will escape, but as a rule the great majority of them go.

3761. (*Mr. Shaw.*) Is your county, Wicklow, a pig-breeding country?—It is to a considerable extent.

3762. The greater part of the pigs that are fed in your district are bred in the county?—They are; and a great many of the pigs bred in the district are sold to be fed in other districts.

3763. In other words you are a pig rearing district?—Yes, very considerably.

3764. Is Baltinglass in your district?—No, it is on the borders of it, but it is not in any union, it is a union in itself.

3765. If a pig refuses feeding, in other words, refuses its food, is it not generally taken by the country people as an indication that it is high time it was killed?—It is.

3766. Do they not generally have the pig killed under those conditions?—Do you mean for their own use?

3767. Do whatever they like, either to market him dead or else cure him for themselves?—They do not do that if they think he is suffering from swine fever.

3768. What do they do then?—They report him.

3769. Even in spite of the fact that they could only get half the compensation if the pig is slaughtered?—Yes.

3770. The pigs in contact are not slaughtered?—They are not slaughtered.

3771. You would be in favour of giving compensation, I understand, for pigs in contact as well as those that are slaughtered?—Certainly.

3772. I mean to say if they have the pigs diseased and the pigs in contact slaughtered, you would compensate them for both?—Yes.

3773. What would you measure the compensation at, or what would be the limit?—The limit as to the valuation of the pig.

3774. That is to say, the greatest amount. I may as well mention as the law stands at present——?—It is only 4*l.*

3775. Four pounds is the limit. Would you increase or decrease that limit?—I think it might be very judiciously increased, but it would not affect my district so much as others, except in a few exceptional cases, because as a rule the pigs that are fed in my districts are not fed to be big pigs. The great demand in that country is for medium-sized pigs, light pigs.

3776. Do you mean for the Dublin market?—No, principally Waterford.

3777. What would you term a light pig. I know the Waterford trade?—I call a light pig a pig from 10 to 12 stone.

3778. From 10 to 12 stone?—Say from 8 to 12. I certainly think it would be a great advantage to increase the limit of compensation, because at present it is a very great hardship on some men. It would be a very great hardship on some where they would have a valuable breeding sow, a sow probably in pig at the time.

3779. You would give an exceptional amount in those cases; would you state what you think would be fair?—What I think would be fair to put as a limit?

3780. Yes?—I have often and often slaughtered breeding sows that I am quite satisfied were worth 8*l.*, and have been only able to value them at the rate of 4*l.*

3781. As an exceptional thing you would grant them 8*l.*?—I should say 8*l.* would perhaps be a reasonable limit.

3782. In the matter of castrators I think you said that in some cases the pigs were brought to a central point to be castrated?—Yes.

3783. Is not that centre in your opinion probably likely to be a centre of infection under certain conditions?—Very often when disease is in existence. There is one town that a man attends regularly for that purpose, that is the town of Arklow. I have known him to be there, and any amount of disease, prevalent in the town, and these pigs brought in and being castrated in the yard there.

3784. Do you not think that a man like that acting in that way ought to be under careful observation and inspection?—I do not think there is any necessity whatever to have the man under observation. I think the case would be met by declaring that as an infected area and not allowing the pigs to go into it.

3785. That pretty well amounts to what I am driving at?—I think it would be a much more practical way of doing the thing than coming at the man. My great idea of the the thing is to prevent the movement of pigs either into or out of infected places.

3786. It would seem from your evidence that that very man although he could not be an infected area is an infected man?—Yes, but he would have the same effect by going about through the country. I do not see how you are to come at him in any way, even by licensing him.

3787. Do you think it would be better to have registered boar stations under special supervision also, that is, the places where the boar stands?—Yes, I think it would, in the event of disease being prevalent in the neighbourhood.

3788. Are there any travelling boars in your district?—No. I never knew of a travelling boar.

3789. Is the condition of the pigs in the labourers' cottages built under the Act better than the condition of the pigs in the ordinary run of farm labourers' and those sort of people's houses?—It is. I have not had very much experience of them, because there have not been very many labourers' cottages already finished in my districts, and therefore I have not seen many of them.

3790. Are the floors of the labourers' piggeries built under the Act proper, do you think? Are they earthen floors, or flag floors, or concrete floors?—I believe they are concrete, but I cannot say for certain.

3791. But you think it necessary that if they are not concrete they should be either of concrete or of some like material?—I think so. I think the floor of every pigsty should be of concrete.

3792. Admitting it to be wise, how could you enforce that all over the country?—There are a great many things that we ought to do but that we cannot do.

3793. You said that you would be in favour of giving compensation for pigs slaughtered if they were in contact. Would you kindly define "contact" for me?—I would certainly say any pigs that were on the same premises.

3794. Under the same roof, or would you go further than that?—I would go further than that, and say if they were in the same yard, unless it were an exceptionally large yard and they were confined in separate houses. But in the great majority of places that I have to deal with, the pigs are allowed to run loose to a great extent.

3795. That is, the store pigs are allowed to run loose?—Yes, and in the summer they are generally turned out in the fields to graze—that is the growing store pigs, and then they are all over the place, so that in those cases I would consider it absolutely necessary to slaughter all the pigs that would be on, the holding.

3796. In exceptional cases you would be in favour of slaughtering all the pigs on the holding?—I would not say in exceptional cases.

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3797. In most cases?—I should say as a rule in most cases in my experience, but that is where that system that I speak of exists, of course.

3798. (*Mr. Wardlaw Ramsay.*) Where they run loose?—Yes.

3799. (*Mr. Shaw.*) What part would you expect the police to play in the matter of stamping out this disease? Would the man having diseased pigs or a diseased pig report to the nearest police barracks about his having it?—Yes, that is the system at present.

3800. Does it work satisfactorily?—It does.

3801. Have the police the right of entry into any man's house, it having been reported, either officially or unofficially, that disease is on his farm?—I believe if it is reported to the police, either officially or unofficially, it is the duty of the police to report the matter to me, and that I am bound then to inspect the place.

3802. I do not know whether your district is a closely-populated district or a thinly-populated district?—It is thinly populated. A great part of it is very thinly populated.

3803. What size is your district, roughly?—It extends over a very large extent of country up in the mountains; I could not give you an idea.

3804. The point is this. Of course you cannot have inspectors at every two or three miles, but can any one inspector cover all this ground, and would not time be lost if the police did not take immediate action?—Yes, if the police did not take immediate action, certainly.

3805. Of course we are dealing with a special time now, that is during the stamping-out period of this disease. Do you not think that every reasonable effort should be made to accelerate, as much as possible, the reporting and dealing with the disease?—Certainly I do.

3806. You mentioned that you have some certain amount of swine fever in your district, and that it is mostly confined to store pigs. To your knowledge, have any pigs of the bacon pig class, who are suffering from swine fever, been sent on to Waterford?—No, not to my knowledge.

3807. If pigs with incipient swine fever on them were put on board ship, where they were down below under hatches, or perhaps not under hatches, at all events, between decks with a high temperature, the pigs being together in a very heated condition, would not that very soon develop the skin marks which you have described as being a marked characteristic of swine fever?—Yes, I certainly think it would.

3808. I mean the high temperature and the contact with other animals, and the excitement and one thing and another, would not that develop those marks?—It would tend to produce them.

3809. Therefore an animal, we will take it, sent to Bristol by the Waterford steamer, if it suffered from swine fever, would be almost certain to show the appearance of it?—I should think it would.

3810. Do you think it would be likely that a case of that sort would go undetected at any of the ports, either Waterford or any English ports?—I do not think so.

3811. (*Mr. Carrington Smith.*) Do you think that there is any risk of disease being conveyed to England through fat pigs going alive from Ireland under present conditions?—I do not think there would be. I suppose they are inspected on their landing here; I do not know the regulations, but if they are inspected on their landing here, I do not think there is any risk.

3812. In your district, are the owners of pigs tenants or peasant proprietors principally?—They are principally tenants and labourers.

3813. Have you any peasant proprietors?—No.

3814. Any owners of their own holdings, either large or small?—We have very few.

3815. You have stated that you consider the maximum of compensation should be raised from 4*l.* to 8*l.*, I think I understood, in cases of healthy pigs?—Yes.

3816. Do you consider the proportion of one-half is the right proportion, and should remain when the other maximum was raised?—That is for diseased pigs.

3817. Yes; that would raise it from 2*l.* to 4*l.* you know?—Yes, I think that would be reasonable.

3818. Who pays the compensation in Rathdrum?—The local authority, the board of guardians.

3819. Out of their own funds only is it?—They are allowed half, I think, out of the general expenses fund.

3820. Do you consider the temperature of the living animal an important condition of the diagnosis as to the condition of the disease?—I do not, by itself, because you will get a raised temperature with any febrile disease. I do not think it is a diagnostic symptom at all without being confirmed by other symptoms which are peculiar to the disease.

3821. Then you do take note of the temperature when you are called in?—I do. As I tell you, I think the taking of the temperature is valuable if you have got an outbreak of disease, and you have the disease in one pig very clearly marked, then if you find a slight rise of temperature in the others you can pretty confidently conclude that they have it, although the symptoms in them will not be so well marked.

3822. That is to say if you have got one pig decidedly diseased, and the temperature was raised in the others which were apparently healthy, you would consider that they were beginning with the disease?—I would, certainly. I would consider it very valuable in that case.

3823. Do not the police and you endeavour to trace the origin of the disease; is that part of their duty?—I do not know that.

3824. Do you consider that the disease is spread more or less all over the island?—I have not had any experience of it at all except in my own unions. I do not know of any other places.

3825. At whose expense is the disinfection of the sties done?—It has been done so far at the owner's expense. I suppose if the owners refused to have it done it would be done by the local authority, but they have always had it done.

3826. The local authority does not pay?—They have not paid so far.

3827. Have you known much recurrence of the disease in the same sties?—I have, certainly. I had one case that impressed itself very forcibly on my mind. It was two or three years ago. Very early in the month of February, certainly in the first few days of February, the disease broke out in a man's place, and his pigs were slaughtered. He had three pigs, and all the pigs were slaughtered, and the place was declared infected for 28 days, that is the time that the place is declared infected. Very shortly after the 28 days were up the man bought three other pigs, and within 10 days after he brought them home they became affected, I think two of them, if not the three.

3828. Had you superintended the disinfection of that sty?—I never saw a better disinfection of a sty in my life than it was; the man was most careful.

3829. What sort of floor was it?—A paved floor.

3830. Then you consider as far as disinfection could go it had been perfect?—It was better done than I have ever seen it done, I think, in any other case.

3831. Then your conclusion was that the germ lived for more than a month, in spite of disinfection?—One of two things must have been the case, either the germ lived or else the man got it in the fair where he bought the pigs. I would not say for certain, of course, about that, but that case struck me particularly, owing to the care with which the man had disinfected his place.

3832. (*Mr. Stephenson.*) Referring still to that case do you know if the troughs were burnt, or were

they used on for feeding troughs?—In the great majority of cases they are stone troughs.

3833. Were they stone?—I cannot say that; I did not notice it.

3834. Was the sty made of wood?—No, it was of stone. I do not remember now whether there might have been a wooden partition inside, but I know the outside walls were stone.

3835. You have seen a great deal of swine fever?—Yes.

3836. Do you find that it is rather an easy matter to diagnose positively the presence of swine fever?—In an acute case it is, but in some of those chronic cases, some of those mild chronic forms of the disease, I find it very difficult, in fact, in some cases I find it utterly impossible.

3837. Are you familiar with the Circular which has been issued by your Department. Have you seen it?—No, I have not.

3838. Do you ever find that pigs die suddenly without developing the symptoms of disease and the *post-mortem* lesions?—Do you mean dying of swine fever or from other causes?

3839. That they die suddenly from swine fever?—I have often had cases where they would die suddenly. I have often seen cases where the owner would tell me that the pig was all right at night and was found dead in the morning, and the pig's colour would be very much changed, but whether the change took place before death or after death I could not say.

3840. Were the *post-mortem* lesions found?—They were not; the only thing that I have found would be the state of the spleen.

3841. What state was that in?—In a somewhat similar state to what you find it in splenic apoplexy in cattle.

3842. There were no bowel lesions or stomach lesions?—No.

3843. You found an enlarged spleen?—Yes; the spleen enlarged and congested.

3844. Would you say that was swine fever or anthrax?—That is what I could not say.

3845. You would not give an opinion?—I could not say whether swine fever would produce it. I know this much, that in many cases of swine fever I have found that state of the spleen in addition to the lesions in the bowels.

3846. Have you noticed the condition of the kidneys in swine fever?—I have not.

3847. You have not noticed that they are spotted?—I have not. I have never paid any attention to the condition of the kidneys.

3848. Referring to the bowel lesions in swine fever, have you ever seen the bowel lesions present and no other lesions?—No other lesions in any other parts of the body.

3849. No other lesions in any other organs of the body?—Generally the spleen is more or less congested, and as a rule there are spots on the liver, and the liver more or less presents a congested appearance too.

3850. What about the lungs?—I have had many cases where I could not detect any lesions in the lungs.

3851. No lung lesions?—That is so.

3852. Have you had a case of swine fever where you had lung lesions, and alteration of the liver and no bowel lesions?—I do not think I have, I do not remember having seen such.

3853. Then unless you found the usual lesions in the bowels you would not take it to be a case of swine fever?—I would be doubtful about it, but it might be possible.

3854. You might be morally certain that you had got a case of swine fever, but you would not declare it until you saw farther?—I would not be morally certain. If I were morally certain I would have no hesitation in declaring it; but I would be doubtful of it. In those cases you spoke of, when the animal dies very rapidly, I do not see how even, if that is swine fever, there could be lesions in the bowels in such a very short time.

3855. Have you seen a number of pigs to look at casually, apparently in good health and feeding fairly well, not wasted, with no diarrhœa, and yet from being in contact you have ordered slaughter, and on *post-mortem* examination of those pigs which were apparently healthy, and which were only slaughtered as in-contact pigs——?—We never slaughter in-contact pigs.

3856. Have you ever seen, in such cases, a pig, apparently well, which, when slaughtered, had the swine fever *post-mortem* lesions well developed without showing any symptoms externally?—I never slaughtered a pig which did not show the symptoms.

3857. You do not know of such a case?—No, I do not know that. We never slaughter any pig except it presented symptoms of swine fever.

3858. I may take it that it is not an easy matter by any means to diagnose swine fever correctly?—I consider in some cases it is utterly impossible.

3859. Without *post-mortem*?—Without *post-mortem;* utterly impossible.

3860. In all your practice have you had any experience of the disease that is now said to be swine erysipelas, but which has been known for years as endocarditis?—I do not know whether you allude to a disease that we call nettle-rash.

3861. No; it is a disease of the heart and its valves?—I have not had any experience of it.

3862. You have no experience of that?—No; I have not.

3863. In disinfecting your sties and places where the disease has existed, what disinfectants do you use?—Generally, whenever possible, I get them disinfected with carbolic acid and lime; but when we cannot do that we get the hot lime, quick-lime, spread all over the floor. The way I get it done is: I get the fresh lime and get it slaked on the floor and scrubbed all over the floor, and get the walls whitewashed from about three to four feet high all round with hot lime. As a general rule the house is shut up and brimstone burned in it afterwards.

3864. Tell me your experience of carbolic acid as a disinfectant in swine fever, how have you used it, and what has been the result?—It has been mixed through the lime.

3865. Carbolic acid put in the lime?—Yes, through the lime wash.

3866. (*Sir William Kaye.*) You have said that everybody nearly in your district keeps a pig; you mean among the small farmers in the district?—Yes; and the labourers.

3867. That being so, do you think there would be any advantage in having them registered?—I do not think there would be the slightest. I think it would be utterly impossible to keep a register of the pigs in my districts.

3868. Do you think it would be important if the inspector of the local authority had power to serve a notice restricting the movement of pigs as they do in the case of pleuro-pneumonia; once the disease is discovered?—I always do it.

3869. Do you think it would be an advantage to do it in the case of swine fever?—I do it in swine fever.

3870. You do it in swine fever?—Yes. I have been authorised by the local board to do it. The very moment I find swine fever in a place I serve notice on the owner, declaring the place infected.

3871. Does not that, for the time being, act just in the same way as declaring an infected place or area?—Yes; but I draw a distinction between an infected place and an infected area. I have no power to declare an infected area. I have only power to deal with the place where I actually find the disease.

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3872. Pending the declaration of an area, do you not find that this restricted notice answers all the purpose?—Yes; as regards the place where the disease exists at the time. The guardians have not been in the habit of declaring an infected area at any time. They simply declare the place where the disease exists an infected place.

3873. Would you be in favour of an area being declared?—Certainly.

3874. But one of moderate dimensions according to the circumstances?—According to the circumstances.

The Witness withdrew.

Adjourned for a short time.

Mr. Richard Dan Garratt, called; and Examined.

Mr. Richard Dan Garratt.

3875. (*Chairman.*) I think you are a dealer living at Barton, near Ampthill, in the County of Bedford?—Yes.

3876. You have a considerable trade in pigs?—Yes.

3877. That being so, your attention has no doubt been drawn to the question of swine fever, and the best method of dealing with it?—Yes, of course it is a great consideration.

3878. Before I ask you any questions with regard to that, perhaps it would be better if I were to ask you to describe to the Committee the nature of your business in some little detail?—Of how I conduct my business.

3879. No, I do not mean how you conduct it, but where you buy your pigs, and where you sell them?—I used to keep a good many breeding sows myself, and I advertised them in some of the papers, and sold them. They suited the buyers, and they asked me whether I had got any more. I supplied my own breed and they gave satisfaction, and those buyers asked me whether I could buy any more for them in our district, which is a large breeding district, and they agreed to give me anything I liked to charge fair for buying them.

3880. Then you mean that you do not keep a great number of pigs yourself, but that you execute orders as it were?—I buy for people, and charge them a commission for buying.

3881. Now, what is your observation about the operation of any restrictions which have from time to time been imposed by county authorities on your business?—I think all the present local restrictions miss the mark altogether of preventing swine fever from being spread. I think they do in our district. In other districts perhaps they have got regulations a little different from ours.

3882. You live near Ampthill. I know where Ampthill is, and where your district must be?—It is seven miles off Ampthill, which is my post town.

3883. Your district, where your business is, must include more than one county?—I lie on the borders of Hertfordshire and Bedfordshire. It is in South Beds and North Herts I get my supply principally from. I do not go into any district except Herts and Beds.

3884. You do not go into Huntingdonshire or Cambridgeshire?—No, I never go that way to buy. I dare not do it.

3885. Why not?—If I went down there I should have to go into the markets and sales and buy them. I know anybody who gets his pigs sick, that is where they are sent, and if I went there to buy I should be bound to get hold of some which had got the disease.

3886. For that reason you do all your buying from the farmer?—I do most of it. I do not make it a hard and fast rule, but I should not think 5 per cent. of what I have bought have been in the markets at all; as I know I should get a good deal better customers if I never did it at all. I go and buy on a farm, where they are all right; but if I go to an auction sale I do not know whose pigs I am buying. They are not in anybody's name, and I should buy them at a risk, and if inquiries arose about the pigs, I should not be able to trace the pigs, whereas now, if anything was the matter with the pigs within a short time after I sent them, I should be quite willing for these buyers to be put in communication with where they originally came from—with the breeders.

3887. Have you ever had reason in the course of your business to consider that you had cause of complaint with regard to the operation of those regulations on your trade?—Yes, it is where I am doing a good business on my system by buying them at healthy places. It does not matter what your business is, you get these restrictions put on all at once to prohibit them coming in altogether. That is where I think the hardship lies with a man doing business carefully. It is not the pigs that anyone buys the same as I do, it is only the pigs that are sent into the auction sales knowingly wrong.

3888. Do you distinguish at all between the two counties in which you tell us your business is, in regard to the regulations in the one or the other; is there anything special that you wish to say as between them?—It is not the regulations in our county. It is the counties we send into. Of course they put an order on, and perhaps pigs are not admitted from Hertfordshire or Bedfordshire either.

3889. Your complaint seems to go rather far, does it not, because it is really a criticism upon prohibiting movement?—Yes, it is. I send to all parts of the country. This is where a good many people make a mistake. It is not the pigs going out of our county. It is the order they make against the pigs being sent into another county.

3890. Still do you admit that a restriction on movement is in principle a proper way of dealing with the disease?—I think it is worked on a wrong system altogether, if it is a genuine endeavour to get rid of the disease out of the country altogether, and keep it out.

3891. That is not quite an answer to my question. I do not understand that you dispute that when swine fever exists some restriction on movement is necessary?—I believe in some restriction myself.

3892. Then in what way do you consider that these present regulations could be amended without doing that unjust injury which you tell us the present system inflicts on your trade?—It is people who know the pigs are wrong, or sickly—I do not say they have got the disease—who say, "We shall not get any compensation if we let the authorities know." I can give plenty of instances, of course I do not want to bring names in, of people who, when they know the pigs are wrong or sickly, send them off to the market, or to those auction sales.

3893. What do you mean by "wrong"?—The pigs are sickly, and they are afraid they have got some disease coming on, and want to get them off their hands.

3894. I suppose, however, you would admit that sooner or later, if swine fever is to be stamped out, there must be a restriction on movement at some time or another?—Yes, there ought to be, certainly. I want to see some.

3895. And that that restriction, in a greater or less degree, must inflict some inconvenience, unavoidable inconvenience it may be, but still inconvenience, upon dealers?—Yes, it would to a certain degree.

3896. What I am anxious to ascertain from you is in what way you consider that the present regulations can be altered, or amended, so as to remove the

grievance which you complain of, without at the same time giving up the principle of restriction on movement?—I think every pig which is sold in a public market, or a public sale, ought to be sold under the owner's full name and address, and I do not think any pigs ought to be taken there except they have been on the owner's premises for a certain time, and they can give a declaration that all the pigs on the place are healthy, and have been to no other market or public sale immediately before.

3897. Do I understand you to mean to restrict them entirely to fairs and markets?—Yes, I think so, except in reported cases of disease.

3898. Do you consider that circumstances may arise under which it may be necessary to proclaim a place on an area, and to prohibit movement in or out?—I think that if the disease breaks out on a place, if it is reported, the pigs on the place ought to be killed at once, and certain restrictions put round that place only.

3899. If that were so, then the very inconvenience which you complain of must necessarily arise?—If there is an area around the same buildings, 20 or 30 yards round, I think it can be confined there, if all pigs in an infected sty are killed at once.

3900. What is it that you complain of now, that the area is too large?—At the present time a certain county will make an order. I am sending away from Bedfordshire or Hertfordshire, perhaps I am sending, we will say, to Yorkshire, and the authorities in Yorkshire, if they have had a few cases of disease come from Bedfordshire, will make an order prohibiting pigs coming from Bedfordshire or Hertfordshire altogether, even from places which may be miles from where there is disease.

3901. Then, in fact, you wish to prevent the restriction on movement going beyond a prohibition on movement in or out of the infected places—Is that your view?—That is my idea, exactly.

3902. Do you consider that there is no necessity at the present time for neighbouring local authorities to protect themselves against swine coming from the county of Bedford?—Yes, I think there is. I think it is necessary that they should have restrictions, that is, on pigs that no one knows anything about. They are put in the sales or markets, and the people know they are wrong. I am informed by pig-keepers in other districts, that this is known to be a common practice all over the country.

3903. Then would you, as I understand, allow a neighbouring county, or any county, in fact, to prohibit swine coming from a place or area, be it greater or be it smaller, on the ground that they are diseased in that place?—I do not think the pigs ought to be sent off the same premises for a certain time. There ought to be no pigs sent off the same premises for a distance of say 20 or 30 yards or more round.

3904. That is not quite the question which I asked. I understood you to say that you objected to another county being able to prohibit the movement into it of swine from a district, we will say, in Bedfordshire, and that it would be a sufficient restriction to proclaim an area, and to prohibit movement into or out of that area into the adjoining county?—I think that would meet the case. If swine fever was reported on certain premises they ought not to be sent off those premises or anywhere near where they were likely to contract the disease, till all were killed and the places disinfected.

3905. Then I understand that you consider that the injury, and, as you think, injustice, to the dealer is, that some distant counties can, as it were, taboo pigs which are to be sold into that county; that is your complaint, is it?—I did not quite catch your meaning.

3906. Do I understand you to complain of the restriction in neighbouring counties, or in one county, I will say, upon pigs coming from another county, that is to say, your county, it may be Bedfordshire, on the ground that there has been disease in that county?—Yes, I cannot see the policy of that. I might explain it in this way. In the village I live, Barton, and there are several villages round, I do not think there has been a case of swine fever for some miles round for a year or two. If I can buy a lot of healthy pigs on a farm, knowing the pigs are all healthy and feeding all right, if I can buy them there, and put them on the rail, and send them straight away to another county, I cannot see that there is any fairness in prohibiting them from those places where there is no disease.

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3907. There have been cases of that kind of which you have reason you say to complain?—There are certain counties now where I have not been able to send a pig for years, and restrictions almost prohibiting in others.

3908. Just give us a few instances?—Nottingham is one; I have not been able to send any pigs there. Cheshire, I think, it has been five or six years since I sent pigs there; but for a very little while it was open to receive them; others I might also mention.

3909. Is it within your knowledge that the county of Bedford is viewed with a certain amount of suspicion in regard to this matter by its neighbours?—Bedfordshire has got a bad name for sending diseased pigs, and it is nothing but the pigs which have been sent to markets and sales which the people knew were wrong before they sent them there. Not only that, if one lot was sent for sale, and there was no more that were diseased there, they might have the disease in a certain stage, but the inspector going round could not see it. I know there are plenty of people who will send to these sales. If there is one pig diseased out of, say, 200 or 300, they have all got a chance to contract the disease. I have myself known pigs lately sent to the markets and sales. I know they have been perfectly healthy when they have been sent there, and when they have got to their destination they have had the disease. Well, it has been contracted at the market, or sale, from other pigs that were wrong and known to be so when sent there.

3910. Where are those public sales to which you allude. What are the principal places in Bedfordshire where these public sales take place?—There is a market at Hitchin, and a big market at Bedford, and there is a market at Luton.

3911. You are aware that the town of Bedford has a separate jurisdiction from the county?—The borough of Bedford, yes.

3912. Do you draw, then, a distinction between the county and the borough in regard to this matter. Do you consider that the county has had to suffer as it were for the sins of its neighbour?—I think people in the county of Bedford have had to suffer from pigs being sent about the county which have been knowingly wrong, and which have been sent to these public markets and sales.

3913. Especially you would say the market in the borough; is that what you wish us to understand?—I do not wish to say anything, and I hope it will not be thought that what I say here will be any injury to any auctioneers who might think so, as I think it will be for their benefit to see that these known sickly pigs are not sent to their sales as it causes them harm, from the fact that genuine buyers are afraid to buy. Also there is the liability of their having their sales of store pigs wholly or partially stopped by local restrictions, as is the case now at the three places I mentioned.

3914. You need not mention any name?—I know that anybody who has got any pigs, if they appear a little sickly and do not feed, the people get frightened. They say, "If I report this I shall not get any compensation." They want to get them off their hands and make the best of them they can, and so off to the sales they go.

3915. (*Professor Brown.*) I understand that you

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buy your pigs of the farmers or pig breeders in Herts and Bedfordshire ?—Yes.

3916. Do you buy them yourself ?—I do not buy all of them myself.

3917. You buy some of other dealers, I suppose ?—Yes.

3918. Do you ever buy any yourself ?—Yes, I buy a good many myself.

3919. You go to the farms, or do you write ?—I go to the farms and buy them myself.

3920. Always ?—Except what I buy through other men.

3921. Except what you buy through other dealers ?—Yes.

3922. How do you ascertain that there is no swine fever on those farms ?—Well, I think, when the owner can say his pigs are all feeding and doing well, and there has been nothing wrong there——

3923. You take his word for it. You know that during last year there was a good deal of swine fever in Herts, and also a good deal in Bedfordshire ?—Yes, that got about very badly, I believe, at the end of the year ; at the beginning of the year there was hardly a case of disease in the two counties.

3924. You are aware that there was a good deal of disease in Herts and Bedfordshire ?—Yes.

3925. When you get pigs from the dealers, how do you get a guarantee of the healthy source from which those animals are drawn ?—I will only have them from a place where I know they are all healthy, right, and feeding well.

3926. You say you do not always go yourself—you buy them of other dealers ?—There are two men that I buy of principally.

3927. Who are they ?—There is a Mr. Cook, at Barton, who does a large trade in buying and selling for the feeders about me, and there is a Mr. Desborough, who lives out the other side of Hertfordshire.

3928. Do you ever buy any of Mr. Manton ?—No.

3929. He lives in Bedfordshire, does he not ?—Yes.

3930. Is he not also a dealer in swine ?—Yes.

3931. Has it ever been alleged in reference to pigs that you sent away to other counties, that they have been attacked with swine fever shortly afterwards ?—The three years prior to last year, that was 1892, of all the pigs I sent away, I did not hear of any of them having the disease after I sent them away, except one lot, which got condemned by an inspector in Yorkshire. I had to have a lawsuit over it, and it was proved that the pigs were perfectly right when they came from the farm. I think that is the only case in those years that anything was alleged. I do not remember anything more.

3932. Was there no case in the beginning of 1892, where some of your pigs were seized almost the moment of arrival, and certified by a veterinary surgeon in Bradford to be the subjects of swine fever ?—What year do you say ?

3933. 1892. Saltaire it was ?—That was in 1891.

3934. You did not make any complaint about it to the Board of Agriculture till January 1892 ?—No, it was the end——

3935. The end of 1891 ?—It was in July 1891 when the pigs were sent. I made a complaint in January 1892 after the trial.

3936. That was a case where they had alleged that some animals which had been sent by you were ill with swine fever ?—Yes.

3937. Do you happen to remember where you got those particular pigs ?—Yes.

3938. Where ?—At Mr. Howe's, at Lilley.

3939. Where is Mr. Howe's place ; where does he live ?—At Lilley, in Hertfordshire.

3940. Do you know whether his premises were inspected afterwards ; was there any inquiry made, in consequence of the information which you gave, at Mr. Howe's premises ?—As soon as I heard from the man to say that the pigs were diseased (the first I heard about it the pigs were all buried and put out of the way), I went to Mr. Goldsmith at Hitchin, the veterinary inspector for the division, where the pigs came from, and told him about the case, and asked him to go to the place, and inspect the remainder of the pigs these were brought from. There were 33 pigs in the place, and there were 20 out of the 33 running about the yard altogether. I also asked him to come on to the place where the pigs laid one night before being sent away. They were taken away on Monday night and sent off to Harlington Station Tuesday morning.

3941. Did he go to those premises ?—He went to Howe's at Lilley, and inspected all his, and came on to the place where the pigs laid at Barton, that is, Mr. Cook's premises, and there were another lot of pigs put in the same sty the day they went away, the Tuesday.

3942. How long did those pigs stay there ?—Those pigs had been in for three or four days, but I let them be in for a week after, that there should be no mistake about the case, and he came and inspected those pigs as well. They were sold to be fed near home.

3943. Did you buy those pigs of Mr. Howe yourself ?—No ; Mr. Cook bought them.

3944. Have you any evidence that they were not put in contact with other pigs before you sent them away by rail ?—They were brought straight from Mr. Howe's premises the Monday night, and left on his premises that same night, and on the Tuesday morning they were taken to Harlington Station and taken straight away. It was very hot weather at the time.

3945. (*Sir J. Wilson.*) They came to whose premises ?—Mr. Cook's premises.

3946. (*Mr. Carrington Smith.*) Is he a dealer ?—Yes.

3947. (*Professor Brown.*) You do not know how many pigs they came in contact with on his premises ?—They were left in the sty one night.

3948. If they had been left in an infected sty for one hour it would have been quite enough. What I want to understand from you is, have you any means of knowing exactly what happened to those pigs between the time of the purchase and the time they were sent by rail ; you have no means, I apprehend ?—The pigs were left in the place one night, and Mr. Cook has never sent any pigs out wrong from his place. He has never had any disease all the time I have been doing any business with him, never for about five years.

3949. Still, the fact remains that you could not yourself possibly have been in a position to know exactly what happened to those pigs after they had been bought of Mr. Howe, and before they were sent away by rail ?—They got to Mr. Howe's on the Monday.

3950. And they were sent away on the Tuesday ?—Yes.

3951. Meanwhile you did not know where they went, or what was done to them ?—When they got down there on the Wednesday they were condemned of having the disease before they were got out of the truck.

3952. Some were dead, were they not ?—Some were dead before the next morning. I told Mr. Goldsmith, the inspector, about it, and he gave his opinion that it would be a very bad case for me if it was proved against me ; and I made every endeavour to ascertain that the pigs were perfectly right when sent away. Mr. Goldsmith said he was satisfied it was not swine fever.

3953. You are aware that in a great number of cases the disease has been traced from Bedfordshire to distant parts of the country ?—I know it is reported, because Bedfordshire has got a bad name about the country.

3954. Does it not occur to you that the counties at a distance, for example, a place like Cornwall, to which the disease was taken from Bedfordshire not long ago, has quite a right to protect itself by saying that it will not have any pigs from Bedfordshire?—I think so, while there is a lot of diseased pigs about the county alive.

3955. How would you propose to deal with such a case as you allege yours to be, where you have pigs only from healthy premises, and send them direct, as you told the Committee a few minutes ago, from the place where you buy them, by rail to the place to which they are destined?—There ought to be an opportunity given of having an independent inspection.

3956. Do you understand my question. Your complaint is that although it is right that the local authority should prohibit against Bedfordshire because they get diseased pigs from Bedfordshire, as you say yourself, from markets and similar places?—Yes.

3957. It is unfair to you to prevent your pigs from coming in because you take care to buy them in healthy premises, and send them direct from the premises to the place to which they are to be sent?—Yes.

3958. How would you propose that that hardship in your case should be remedied by the local authorities of whom you complain?—I think we want protection for our own pigs at home.

3959. Protection against what?—Against disease that is roaming about the county all the time.

3960. Then it seems that you agree that they should make regulations to prevent pigs coming from Bedfordshire?—No; I do not think they ought when they go direct from healthy places.

3961. But how are they to know that?—I think by a simple declaration, if anything was wanted, sent with the pigs.

3962. Then I understand that in this particular case to which you referred, where the pigs were sent to Saltaire, you would have sent a declaration that they came direct from the premises of Mr. Howe right to the station where they were landed; you would have sent a declaration of that sort?—I would have sent a declaration that they had never been in any market, but came straight from the place.

3963. You would have sent a declaration of that sort?—Yes, certainly.

3964 Notwithstanding that you would have done that, you were perfectly aware at the same time that they had gone to some other premises for that night. That is the case, is it not; it is yes or no?—I do not quite follow you. If it was required to have a declaration that they came straight from the farm and straight to the station, I should be obliged to send it; but if they go on to another place, I could not make a declaration that they came straight from the farm there.

3965. You just told me you would?—I misunderstood you.

3966. Then in any case where you propose to give a declaration of that sort, you go to the premises and buy the pigs. Now what steps would you take after you bought in order that you might give a declaration?—I should make a declaration that they had never been in any market, or near any diseased pigs, nor on any premises where there had been diseased pigs.

3967. Do you think that that declaration would be accepted; do you think anybody would believe that you could possibly know whether the pigs had been in a market or in an infected place, especially when they were bought by another man?—I do not think the authorities down in the other counties had got the means of knowing.

3968. Of course they had not, and therefore the declaration would have been of no use?—I am quite willing if any pigs I sent were proved to have had the disease within any time, to put it into the hands of the police, and to go to the place where the pigs came from, and trace where the pigs have been to since they left the place.

3969. Does it not occur to you that rather than take a declaration of that sort with the probability of finding that it is based on imperfect information on the part of the person who makes it, it is a much wiser and much easier thing for the local authority of a distant county to protect itself by prohibiting from the county when they know the disease exists there, and have very painful evidence that the disease is sent from there; is that not a more simple way?—Yes, it is, but still it does our own breeders a great injury if they have got healthy pigs, and they cannot send their pigs on account of this.

3970. I understand while you admit that it is an easy and simple method of dealing with the subject, that it is an interference with your method of doing business, and that you object to it on that account?—There are a good many licenses that would have to be obtained. I have to go perhaps six miles to a magistrate to get the form filled up, and be put to a lot more inconvenience. I do not think that it could be proved that I have made a false declaration more one way than the other.

3971. I did not suggest that you had made a false declaration. I was not aware at the moment that you had ever made a declaration at all. My point was this, that it is more easy for the local authorities to protect themselves than to prove a declaration, and you said yes. Now I should like to ask you if you think any advantage would arise from pig dealers being licensed, having a numbered license, so that they should always be capable of being identified. I am not speaking of your particular case, but of pig dealers in general. You know at this moment any man can buy and sell pigs?—Yes.

3972. Whatever his character may be, do you think it would be an advantage that all pig dealers should be licensed?—That is a question I have never thought over.

3973. You do not feel competent to answer it?—No, I have not thought it over.

3974. Do you see any particular difficulty at the moment?—Perhaps you would explain to me a little the nature.

3975. I could not explain to you the form of the license, but you know what a license means generally. Would you, for example, personally object to have to apply to the local authority for a license to sell pigs before you could sell any more?—Do you mean for each lot of pigs I send away?

3976. No, to be licensed as a pig dealer?—I should not see any objection.

3977. Still you have not thought the matter out?—No, I have not.

3978. Do you ever bring any pigs which you buy on to your own premises?—Yes.

3979. Do you keep them there any time?—Sometimes I do.

3980. How long?—I feed them myself.

3981. I am asking now of the pigs which you buy for the purpose of sending away?—Perhaps I keep the pigs a few weeks, but as a rule with most of my pigs the money is sent to me, and I spend the money for the people.

3982. And that is the usual method of doing business with dealers in swine?—With people at a distance I do it that way myself to protect myself against any fraud or anything. I always get the money first, and go and spend it for the people who may want the pigs, and who send it to me.

3983. And you send the pigs off at once?—As soon as I can buy them.

3984. And that is what is done by dealers generally, is it not?—I think it is for a distance.

3985. It is very natural that it should be, is it not?—Yes. I do not deal with all like that; of course I have people that I know, but I do that with strangers.

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3986. I think I understood you to say that it would be rather embarrassing when the local authorities at a distance prohibited, and you were not aware of the prohibition ?—Yes. Several people get into a scrape as it is, by those local restrictions ; they are often not aware themselves that there are any in their own district—this applies even to the police.

3987. When you take pigs to the railway station, and book them to a prohibited county, the railway people would not take them, would they ?—There is a great difficulty in finding out the stations where they are.

3988. Do not all the railway companies keep a list ? —Yes.

3989. And they refer to that list ?—Yes ; but then sometimes the place is in one county and the station is in another. I have had them sent on, and they have had to come back for that reason.

3990. I take it that when this has happened you have not known yourself that there was any prohibition ; you bought the pigs to send them away, and were suddenly confronted with the difficulty that that particular place was prohibited ?—Well, I have got used to it lately. When I began to send away some five or six years ago, of course I had to go to the people at the station, or the buyers, to know of the places where they were prohibited, but I know about it now. I have got over that now, and as a rule I know what places are restricted, but not always.

3991. Now, before buying the pigs you would ascertain if you could send them to the places ?—I have it printed in my circular that I want any one, if they are in doubt on the matter to ask the superintendent of the police in the place.

3992. And that actually gets rid of the difficulty altogether, does it not ?—Yes, it does now. That is not so difficult. Still the police in the buyer's district are not always aware of the restrictions.

3993. (*Sir Jacob Wilson.*) How far do you live from the town of Bedford ?—About 13 miles.

3994. You have mentioned the markets of Bedford, Luton and Hitchin as the three markets at which pigs are sold in your neighbourhood ?—Yes.

3995. You are aware, I presume, that Hitchin is in Hertfordshire ?—Yes.

3996. Are there not other markets in Bedfordshire besides the two you mentioned ?—There are none where there is much business done.

3997. Are pigs ever sold at Dunstable ?—Very few, I think.

3998. Are they ever sold at Leighton ?—I think there is a market there ; I never go there.

3999. Of the three markets which you have mentioned which do you personally attend ?—I attend Hitchin and Luton, but not to buy pigs.

4000. And although you are only 13 miles from Bedford, you do not attend that ?—No.

4001. Who buys for you in the town of Bedford ? —No one.

4002. Are pigs frequently purchased in the town of Bedford by farmers or dealers, and then sent into the county of Bedford ?—Sent about the county ?

4003. No, to be kept in the county of Bedford ?— Yes, I think there are some, but I have never been ——

4004. I only ask for yes or no, whether they are or not to your knowledge ?—I cannot tell ; Bedford lies out of my district altogether.

4005. Thirteen miles off ?—Yes.

4006. Is it within your knowledge that pigs are purchased in the borough of Bedford to be kept on in the county of Bedford ?—Yes, pigs are bought to be kept in the county of Bedford.

4007. What other towns or markets do you attend for the purpose of buying pigs ?—I do not buy any at the towns.

4008. At what other towns or markets do your agents buy pigs for you ?—I do not buy them at any of the towns.

4009. I ask as to your agents ; I do not say you ? —My agents do not ; I do not have any one buy at any of the markets or towns at all.

4010. Are those agents in a large way of business ? —Yes.

4011. And do they buy for other people besides yourself ?—Yes.

4012. And they regularly attend the markets throughout the country to buy for other people, I presume ?—No, I do not think Mr. Cook ever buys any pigs out of the market.

4013. But he buys them from the farms in the county ?—Yes.

4014. Is it not possible that those pigs which he buys in the country may have previously been bought in the markets by other people ?—No ; if he knew that there was a pig wrong in the auction sale he would not buy it.

4015. I have not referred to an auction sale; I said in the market ?—I have never known him buy a lot out of a market ; he often takes a good many there though.

4016. Therefore, he has a number of pigs passing through his hands ?—Yes.

4017. Either for the purpose of sale or purchase ? —Yes.

4018. Now, at what distance does he reside from those markets ?—He lives close to me ; it is about six miles from Luton, and seven from Hitchin.

4019. Do the pigs for those sales, markets, or auctions go by rail or by road, as a rule ?—There are a good many sent away by rail, and there are a good many sent about the county.

4020. I want to know how the pigs are sent to market, whether by rail or by road ?—They are taken by road to the market.

4021. That is what I thought ; they go by road to market, and, as a rule, are sent away by rail ?— Yes.

4022. Some of those, I take it, from long distances are probably sent the night before to market ?—Those sent out of Bedfordshire and Hertfordshire are taken the same day.

4023. The same morning ?—Yes.

4024. Are they sold in the carts, or are they taken out and put into pens ?—They are generally put into pens. As regards Bedford, I cannot say much about it. I have not been down to Bedford much.

4025. I did not ask you about Bedford ; I am asking about markets generally. There is some reason or other which prevents you ever going into Bedford ; I see that ?—Yes, I have not been to Bedford above twice this last six or seven years.

4026. And, I have no doubt, you have very good reason for not going, but the general question I put was, what is the habit and custom of the country ?—As a rule, all the pigs in the markets are put into pens and sold there, either by auction or privately.

4027. And then a dealer buying a large number of pigs puts them together into a lair, I presume, or takes them to a station and puts them into a pen or truck ?—Yes.

4028. That is the practice ?—Yes.

4029. There are lairs, I presume, in connection directly or indirectly with those markets ; generally at public-houses, I believe ?—I do not think there is anywhere in Hitchin. The pigs are bought in the market or the sale at Hitchin, and they are sent away by rail, and taken by the people who buy them at the place.

4030. Straight away ?—There are seldom any left there over night.

4031. What becomes of the pigs that happen to remain unsold at those markets ?—They are taken home if they are not sold.

4032. Therefore, after having had the opportunity of being in contact with other pigs in the market, are they taken home without any fear of risk ?— Well, there would be some fear of risk.

4033. But that is the practice?—Yes, but there are very few that take them home.

4034. I only ask the question. You have mentioned that you confine your purchases to the counties of Hertford and Bedford?—Yes.

4035. And the reason you give is that if you went beyond that you would expect to get disease; that is what I took down at any rate?—I have never been into any other place.

4036. The reason you gave us was that you were afraid of getting disease if you went beyond that?—Yes, if I went beyond that, or to the markets.

4037. Do you insinuate then that there is a greater amount of disease in other counties than in Hertfordshire or Bedfordshire?—I cannot say.

4038. Your objection to restrictions is that they should exist in the counties into which pigs are sent from Bedfordshire, like Yorkshire and some other counties?—I believe in having restrictions myself. I believe there ought to be restrictions. For instance, there is Westmoreland and Cumberland; in those counties I have to fill a declaration up to say the pigs have not been in any market or sale for so long previous, and to send it in with the licence.

4039. Your agent, Mr. Cook, has large premises in which he collects pigs from various sources?—Pigs that he buys about in the district off the farmers.

4040. He collects them in his own premises?—Yes.

4041. Do you not think it possible that by an accident the pigs might be contaminated by being thus mixed in Mr. Cook's premises?—I think it would be almost an impossibility for him to get the disease the way he does his business.

4042. He does his business by mixing the pigs, I take it, as you have described?—He goes to farms and buys them there.

4043. And brings them all together at last, or hawks them about till he sends them off?—Yes.

4044. The next day?—Yes, sometimes.

4045. Do you say that no instance has ever arisen in which disease could be traced to Mr. Cook's premises?—All the time I have done business with him I have been next door to him, for the last five years, and I do not know of one farm where any pigs that he sent have had the disease.

4046. I have not asked a question referring to the farm from which they came. I am assuming that he takes them from the farm, and that they arrive at Mr. Cook's premises; I have now done with the farm, and I ask you if you know whether any case of disease has ever been traced to Mr. Cook's premises?—No; these last five years I have never known a case of disease traced to his premises.

4047. Have you known of it prior to that period of five years, or heard of it prior to the five years?—No, I have not. I did not do much business with him before.

4048. Do you think it probable that the disease would develop in one night, in the event of it being taken there?—That is a question for the veterinary authorities.

4049. I ask you—you are a large dealer in pigs?—If some pigs stayed in there and laid 24 hours?

4050. Yes, whether they might then be contaminated and not show it?—I just think it very probable.

4051. Now, you stated that when pigs are seen to be wrong, they are usually sold off, that being the practice of the farmers of Bedfordshire?—I am sorry to say it is; that is how they are smuggled off.

4052. You do a very large business, I believe, all over England, and send a good many pigs into Scotland also?—Yes.

4053. When you receive numerous orders, as no doubt you do, how does it happen that you know exactly where to find the pigs to supply the demand?—At the present time I have kept people waiting for two or three weeks. I advise them not to send all the cash as usual. I tell them if they want 10 pigs they should send me perhaps 10*l.*, to send them eight, nine, or ten pigs, which I can best buy for the money. I have got many orders in hand at the present time, but I cannot find the pigs, and I am advising the customers now not to send the money before I know where they are.

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4054. What means do you adopt to know where to find the pigs that you require for their respective purposes?—Mr. Cook or myself; we are generally about all over the district, and generally can find where they are.

4055. I suppose it happens frequently enough that you get a private message from a farmer saying, "I "have got a litter of pigs. If you have any "customers, will you come and see them"?—Yes, I often have letters, or see people at the market. They tell me "the pigs are ready; when you have got an "order for them, come and give them a look."

4056. Probably if you get an order, you sometimes write and say, "send them," and that sort of thing; or you send them an address where they are to go to, or do you say, "send them to my own place"?—Do I send the pigs direct from the place I get them at?

4057. Yes?—Or from my own place?

4058. Or do you bring them to some other place?—I sometimes take them direct, but, as a rule, I bring most of them home, if they are heavy hogs to load up.

4059. I suppose it would not be unfrequently the case that as a matter of convenience you would probably send them the address and the crate, and say, "send them to the station"?—No, I do not do that.

4060. You do not do that?—No.

4061. I take it you send away a great many pigs that you never see at all, considering the numbers you deal with?—I generally see most of the pigs.

4062. You generally see most of the pigs, but not necessarily?—I think there is hardly a pig I have sent away but what I have seen.

4063. Do you send all your pigs in crates, or in open trucks?—As a rule I send them in crates except they are very heavy hogs, and a quantity together.

4064. And those crates go all over the country, as you have stated, and even into Scotland?—Yes.

4065. Are those crates returned?—Yes.

4066. What do you do with those crates when they are returned?—I generally clean them out, and every now and then I give them a good disinfecting out, because they get nasty, and smell nasty.

4067. You used the word "generally," that is, you do not always; what do you do at other times?—I always scrape and get the muck and stuff out, but I do not disinfect them every time. I do every now and then give them a good wash and swilling out with some disinfectant.

4068. Are those crates ever disinfected by the railway company?—No.

4069. Has it frequently been your misfortune to find the disease break out among pigs which you purchased out of what you consider a healthy herd?—Do you mean after they have gone away?

4070. Yes?—As I say, in the three years prior to last year, I do not think I heard of a case. I do not remember a case, but at the end of this year I have had reports when the pigs have been at certain places, for instance Cornwall; that was about a month after I sent them, I had a letter saying the pigs had the disease.

4071. Is it your opinion that it is possible they may have contracted the disease after they left Bedford?—I cannot say. I know they were healthy, and feeding all right when I bought them, and they had never been near any disease then.

4072. Are you able to detect disease from the external appearance of the pig?—No, I should not be able. All that I go by is that all the pigs that are on the premises are healthy and feeding well. If there is anything a little bit suspicious and queer, I should certainly not buy the pigs.

4073. Would you object to buy a pig that was

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living in the same sty with a suspected pig?—Yes, certainly.

4074. If you go to a place and see one weak-looking pig, would you object to buy any pigs on the place?—If I was to go a farm, and the man had got four or five litters, and there was one of them seemed bad and queer, or anything of that, I should not buy any of them, but study my customers.

4075. Is it not your experience that there is generally a "wreakling" in every litter of pigs?—Yes, certainly.

4076. Would it not be a hardship upon that farmer if you refused to buy his pigs, because there was this inferior pig?—If one pig was small, and the rest all right, if it was ever so small, I should not take any notice of that, as long as it was healthy.

4077. But you would limit your opinion of the symptoms to the fact of the pig not feeding?—I should go further if the pig crept under the straw and hung about, and was not bright. You can generally tell if there is anything the matter with a pig.

4078. Would that not apply to other diseases affecting pigs besides swine fever?—The veterinary authorities know more as to that, but it is my idea that there is above one contagious disease in pigs. That is my idea; I do not know; or else it assumes different forms.

4079. Therefore, seeing the difficulty of detecting the disease, you are very liable to buy pigs which might be diseased, and you not know it?—No, I should not be; there would be very little fear of that. If I were to see the pigs running about the yard or lying in the sty, there would not be much fear of my buying them. The seller, if he knew the pigs would not feed, would know that I should be sharp on to him to follow him up, and I do not think he would sell them to me.

4080. You do go to markets, I take it, although you do not buy pigs yourself in towns or markets?—When you say I do not, I have done so, I am sorry to say, in my time.

4081. I have only your evidence to go by; it is what you have said you know, that is all. You said you "do not buy at those places." I will put it in this way: Have you ever purchased pigs in open sales or markets?—Yes. I daresay last year I might have bought, perhaps, 30 or 40 pigs.

4082. Did you buy those pigs on one or more occasions?—Last year I did not buy them. I said to a man at a sale, "There is a lot of pigs there; I know the farm they come from; if you buy them and keep them at home about a fortnight, and keep them in health, and they feed all right, the pigs being very cheap, I will have them.

4083. Were they bought for you?—They were bought for me.

4084. You bought them through another person?—Yes; I dare not buy them myself to take them to my own premises.

4085. The act of buying was through an agent. Where were these purchases made?—I do not know. I have had two or three lots out of Hitchin Market, and I have had two or three out of Luton Market.

4086. Can you tell us where they went to?—No, I cannot.

4087. They might have gone to Scotland?—I cannot tell those identical pigs.

4088. Therefore, you cannot always trace the pigs that you purchase to their ultimate end; they go all over the country?—Yes.

4089. Did you ever hear of those pigs again?—Those I purchased out of the market, do you mean?

4090. Yes.—No; not any that I bought this last year.

4091. What pigs did you buy at Luton in the same way?—I do not know. I bought three or four lots out of the open market or sale this year.

4092. In the same year?—Last year. Before last year I never bought one.

4093. Who were they bought by?—Well, I would rather not mention any names in the matter.

4094. Do not be alarmed, or think I have got anything up my sleeve, for there is nothing there?—They were not bought by a dealing man; I did not send a dealing man to buy them.

4095. Did you buy them personally or through an agent?—Through an agent.

4096. Was the purchaser of those pigs either of the gentlemen you have mentioned as your agents?—No, certainly not; they advised me not.

4097. I can understand that; you were interfering with their business?—It is not only that.

4098. Therefore you do employ agents other than the two you have mentioned; it is very likely you would, in a large way of business?—This man that I sent the pigs to, to feed, was about me; I have got people about me sometimes, if I see a lot of pigs.

4099. Part of your practice, then, is to buy pigs for immediate delivery to customers on the one hand, and on the other, to feed and to speculate, by keeping them for better markets, as the occasion arises?—If one man has got a lot of pigs to sell ——

4100. I only want a yes or no. That is your practice —I mean, to do one of those two things. You sometimes supply pigs immediately to customers, and at other times you get the pigs what I may call placed out, or boarded out, with other people, to keep them until you are provided with a market for them?—Yes, I do occasionally have pigs like that.

4101. Your business is mainly, I take it, with store pigs?—Yes.

4102. In contradistinction to fat?—Yes.

4103. Do you give a guarantee of the health of the pigs you sell?—I give no further than this: That the pigs are all healthy and feeding when they go away; have been near no disease, to the best of my knowledge, when I deliver them on the rail. But I tell my customers if there is anything the matter with the pigs shortly after they get them, it is the best way to let me know at once, and I will put them in communication with the seller or where they have been to. Of course, I want to do my business straightforwardly.

4104. I take it that you have customers throughout the country that you do business with every year?—Yes.

4105. The same men?—Yes.

4106. Are those chiefly farmers, or butchers, or dealers?—There are a good many that feed themselves, and there are a good many that sell them out.

4107. So that you supply to dealers throughout England as well as to those who feed?—Yes.

4108. And those dealers, on the other hand, distribute them throughout the rest of the country?—Yes, I send a man perhaps half-a-score of pigs, and he sends them out in ones or twos, or otherwise.

4109. In the event of a dealer buying pigs from you and he, unfortunately, finding an outbreak a few days, or a week afterwards, amongst them, and informing you of it; I take it that you have no difficulty in arranging matters with him as a matter of business?—I leave it entirely to him.

4110. He asks for a certain amount of compensation and you have an understanding between each other, and the thing goes on in a satisfactory manner, and thus I suppose you have no difficulties between you?—If there is anything the matter with the pigs I always tell him, if he puts it in the hands of the police or he is willing to do so, I will let him know.

4111. The fact is you compensate him?—No, I do not compensate a man, I do not make any compensation. I buy the pigs pretty carefully, put them on the rail, and when they leave my hands I do not take any further responsibility.

4112. Do you mean to say that you would not make any allowance to an old customer in the case of an outbreak involving a great loss to him, with the prospect of further business?—I do not know that I ever have had a case like that.

4113. You would be regarded as a very harsh customer?—I have never had anyone have a pig which has had the disease within a short time after I sent it.

4114. (*Chairman.*) You have issued a prospectus in regard to these points, have you not?—Yes, and I think you have got one.

4115. It would not be fair to ask you to put this prospectus in as evidence unless you are willing; but I can read you an extract from your own description of what you do. You say: "I use the greatest care in pur- "chasing to ascertain all are healthy, feeding, and "doing well, and from reliable sources, but can take "no responsibility for what happens if I see them "safely and securely sent off in that condition." That is your rule?—Yes.

4116. And then you go on to describe what you do, and you say: "should they at any time not arrive in "reasonable time and in good condition through any "fault of the railway company the consignee should "complain to the railway company before removing "them and write at once to me, and I will see to it, so "that they suffer no loss by this"?—Yes, if there is anything injured by delay on the railway, and I have had several lots like that, I tell them to leave the pigs till the company admit their liability in the matter. I have had pigs delayed sometimes a day or two too long, the same as this Bradford lot, when I have had them, in hot weather, get smothered up and killed; that was a very bad affair. If the railway company are at fault, of course, the company ought to pay, if there is any delay or neglect on their part.

4117. Do you consider so far as your business is concerned that the administration of all matters connected with swine fever would be better administered by the Board of Agriculture than it would be by the local authority?—I think so, decidedly.

4118. (*Mr. Shaw.*) It has been stated that pig dealers in certain places, not a hundred miles from where you reside, are able to offer young pigs at absurdly low prices through buying them cheap from infected farms. Now that is no reflection on you whatever because you, I think, in your evidence show that you do your business in a very superior manner; but is there any truth in that report?—I think a man would be a foolish man to go and buy them. I do not think they would go to a farm if they knew the pigs were really diseased, to buy them and send them away; but there are plenty of pigs now about five weeks old, before they can hardly feed, which are sent away because they can get them at a low price. The report is that the pigs are bought when they are only about five weeks old, they are not old enough to feed then, and that is done to get them away at a certain price. If a pig is only five weeks old it cannot feed properly.

4119. If they will offer a pig at ten weeks old for 12*s.*, is that not so; do you consider that a fair price for a pig in your business?—There are not any pigs about our part which are healthy and all right and straight and can feed, say, at seven weeks, which are to be had for less than 16*s.* at the present time. When you go to eight weeks, I have given lately 1*l.* a-piece for them; they are very dear this year and cannot be bought under.

4120. Can you explain how these very cheap pigs are provided by those dealers?—I do not know There are no pigs I know can be bought at anything like that price now. This year is an exceptional time. Pigs have not been known to be so dear for a good many years.

4121. (*Mr. Carrington Smith.*) Do you breed as well as deal?—I do very little of it now, I have not got the convenience where I am.

4122. Do you know how many counties prohibit Bedfordshire pigs?—There are Cheshire, I believe, at the present time, and Nottinghamshire. I never have been allowed to send a pig there except a few for breeding, certainly not, say, for five or six years.

4123. Does Staffordshire?—Staffordshire does at the present time, both from Hertfordshire and from Bedfordshire.

4124. Do you send many of your pigs by crates or by trucks; by which process do you send most?—It is seldom I send any by truck.

4125. Generally by crates?—Most of them by crates.

4126. Are the crates your own property?—Yes.

4127. What do you make them of?—I generally get some big boxes and convert them into crates.

4128. How long do you keep them in use?—Till they are worn out and not fit for anything else.

4129. Nobody ever interferes with you with respect to the condition of those crates; no public officer, either the local authority or the police have ever enquired into the condition of the crates?—No.

4130. So you send them as you like yourself?—Yes.

4131. You say sending them to market is a frequent cause of giving disease to pigs, but there would not be disease in the markets unless there was disease in the district, would there?—Directly a man sees a lot of pigs become sickly and queer, he thinks he must get them off his hands some how, and that is where they are sent to. It is these, and non-reported cases, that do all the mischief.

4132. I understand there are a good many farms in your neighbourhood upon which pigs are sickly and queer; you do not buy them, but other people send them to market?—As soon as anybody gets them sickly and queer, and finds they do not feed, a good many want to get them off their hands. It is only occasionally that a case gets into the public markets and sales, but that is enough to taint the lot.

4133. Say, to the auction yard?—Yes. If you go to an auction yard you do not know whose pigs you are buying.

4134. The auctioneer does not give you the name of the owner?—Sometimes he does, sometimes he does not.

4135. You said that your agent, Mr. Cook, attended market, and sold a good many pigs at the market?—Yes.

4136. What did he do with the pigs for which he did not find a sale at the market; did he bring them back home?—I have not for some time known him bring any back; he always sells at some price, if he has to lose a little on them.

4137. Does Mr. Cook keep a stock on his own premises, or only what he deals in?—Only what he deals in.

4138. When your pigs stayed that night at Mr. Cook's, you did not know whether they were mixed with other pigs or not?—Are you referring to any special lot?

4139. To those that you bought of Mr. Howe and sent to Yorkshire, they stayed all night at Mr. Cook's?—Yes.

4140. You do not know, probably, whether they did mix with the other pigs or not, but they might have done?—They did mix with some more, because there were some lying in the next sty to them, and some put in the same sty the same day they went off.

4141. Have you formed any opinion in your mind how it was those pigs were not in a satisfactory state when they arrived at their destination in Yorkshire?—They were smothered up in the truck. It was very hot weather in July, and the pigs got overheated I am afraid they were put in much too close.

4142. So the veterinary surgeon at the other end came to an incorrect conclusion—they had not swine fever?—I went to our inspector, Mr. Goldsmith, at Hitchin, and the inspector for Luton, that is Mr. Leggatt, and stated the case to them, and it was their opinion that it was impossible for them to have contracted the disease in the time, and that they had not got it, and that they died from being over-

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heated. I have had them like that in hot weather before. I have lost several by it. The pigs were killed (except the two or three that died) and put out of the way, or else I would have got one of the inspectors to go down to see it.

4143. Was it not understood that a post-mortem examination was made of the pigs in Yorkshire ?—Yes; on those that were sold for food only.

4144. Your friends just told you that, after the pigs were slaughtered; did they see the pigs or only give that as an opinion ?—The inspector for the division where they came in at Hitchin, inspected the 13 pigs that remained behind.

4145. Belonging to the same lot ?—Yes; and they were fatted by the man on the place.

4146. And none of those were ever ill ?—None; nor any on the place, nor any that went from Mr. Cook's place.

4147. When you have pigs at home, at what station do you put them on the rail when you have them staying on your own premises before sending them off ?—As a rule at Luton, but lately I have had to take a great many to Hitchin, for the reason that my pigs bought in Hertfordshire at the present time cannot be brought into Bedfordshire; and I am obliged to take some pigs that way, and take the crates with me and put them on at Hitchin station. Pigs are prohibited coming out of Hertfordshire into Bedfordshire at the present time; so when I buy in Hertfordshire I am obliged to go to the Hertfordshire station straight away. This is a useless, inconvenient, and senseless restriction.

4148. Have you found that the prohibitions as to pigs going from Bedfordshire to other counties interfere with your trade ?—Certainly; take Staffordshire, for instance. I was doing a good trade down that way, and they stopped them from coming from Bedford.

4149. Had you had many previous complaints from Staffordshire before the pigs were stopped from going ?—I never had a complaint of any pigs of mine going into Staffordshire.

4150. Have not enquiries been made of you from the Staffordshire local authority as to where certain pigs had come from ?—I do not remember anything about it.

4151. Then the prohibition of your pigs going into Staffordshire came upon you as a surprise ?—No, it was not a surprise, because I know if pigs are bought at those auction sales they soon get a diseased one.

4152. Then you do know that pigs did go from your county into Staffordshire, of which complaints were made, though they were not your pigs ?—I never had any complaint about any. I do not remember any.

4153. What makes you say it was not a surprise to you that the pigs were prohibited—what made you anticipate that ?—If I went to the auction sales, and bought pigs week after week, I should have some diseased pigs.

4154. You agree that the auction sales are a very frequent source of disease ?—I know they do the whole mischief, directly or indirectly.

4155. The whole mischief ?—I think it is the whole mischief. Of course, if they report to the police, they are not allowed to move the pigs off the place, but the diseased pigs may be about for weeks and weeks, and they are then on the farm for some weeks, and we know that everything going about that place must have a chance of spreading it.

4156. (*Mr. Stephenson.*) Have you seen pigs suffering from swine fever ?—Yes.

4157. You are acquainted with it when you see it ?—I am sorry to say I had one lot with it.

4158. You have had pigs with it ?—Yes.

4159. In your own place ?—Yes.

4160. What was done with them ?—They were condemned.

4161. Were they slaughtered, or did they die ?—Some of them were slaughtered. At that time what had got the disease were killed, and we had half-price for them.

4162. How long was that ago ?—Seven or eight years ago.

4163. Not since then ?—No.

4164. Now, you said in your examination in chief that in-contact pigs, that is, pigs which had been beside diseased ones, were sent to sales and markets for sale in your district, is that so ?—Yes, I know nobody that had got a lot——

4165. Is it really a fact ?—Yes, I know they are.

4166. How do you go to these sales and markets and buy them. You buy pigs at sales and markets. You said so, you know ?—I have bought three or four lots.

4167. Although you know that in-contact pigs go to these places ?—There were only two or three lots in the sale when I bought them.

4168. Still, it was done ?—Yes, it was done.

4169. And is that done because no compensation is given in the district ?—Yes.

4170. If compensation was given, do you think they would give notice, and have their pigs slaughtered in a proper way ?—Yes, I talked this matter over to a great many poor people and others.

4171. You said that if compensation was paid, they would give notice, and not smuggle the pigs away to sales ?—If compensation was paid the people will not smuggle the pigs off the premises.

4172. Are you aware that all the railways are advised as to the places that are scheduled ?—I know they have to find out from private sources.

4173. The railways find out ?—Yes.

4174. They are advised, and at every station there is a list of places that are scheduled ?—They do not get them all perfect. It is a lot of trouble for them to get the names of places scheduled.

4175. Have you ever sent pigs to Northumberland ?—Very few. I do not think I have these last two years.

4176. Did you ever send any there ?—No; well, I have not these last two or three years, I think, owing to the restrictions there, it is a great difficulty to get the licence. I have not troubled about it.

4177. Have you ever sent any to the borough of Tynemouth ?—I do not remember.

4178. Have you sent any to Berwick-on-Tweed ?—I do not remember.

4179. Or to Morpeth ?—I do not remember.

4180. You know the county of Huntingdon ?—Yes.

4181. Do you get pigs from there ?—No.

4182. Why do you not get pigs from there ?—Because I can get a good supply round about me as a rule.

4183. Are you afraid of getting pigs in Huntingdon on account of the disease ?—If I went down to Huntingdonshire I should have to go and buy them in the markets and sales, and I would not go down to the markets and sales and buy them.

4184. Not from fear of the disease ?—There would be the fear of the disease. I should not go to the markets and sales.

4185. You are afraid to buy in Huntingdonshire ?—I should not go to any markets in Huntingdonshire, and I could not buy them from private sources. I should have to get some one to go round the farms and buy them, but I do not know the country people there, and so I could not do my business down there.

4186. (*Mr. Wardlaw Ramsay.*) I suppose you are pretty well acquainted with the condition of Bedfordshire, as to the disease ?—I know it does not matter what part of the country you are sending to.

4187. Do you know whether there is a great deal of disease there at the present time ?—I do not know of any case of disease generally, for miles and miles.

4188. Do you know whether it is a fact that there

is a great deal of disease in the borough of Bedford? —I would rather leave that. I have never been down to Bedford above twice this year. I do not know about Bedford. I would rather not answer.

4189. You have stated that you strictly avoid going to the borough of Bedford now?—Yes.

4190. Why is that?—Because I make it a rule not to buy at these markets and sales at all.

4191. In two cases, Luton and Hitchin apparently, you make exceptions there at times?—Well, lately there has only been perhaps not above one or two lots of store pigs in the sale yard, and——

4192. Is it on account of the danger of swine fever that you avoid going into Bedford?—Yes, that is the simple reason.

4193. Have you had swine fever on your own premises, where you are now?—No.

4194. Or since you began your business?—I have not had swine fever on my own premises. I had it at an off place where I had some pigs lying.

4195. I am referring more to the present time?—It is during the last four years that I have done my business. I have had none for about seven years on my places.

4196. Is it the case that the railway rates have been higher?—Yes.

4197. Within the last year or so?—When the new rates came in at the beginning of the year we were prohibited from sending them altogether for a while.

4198. You were?—Yes.

4199. You do not happen to know whether that had any effect upon the amount of swine fever, as has been stated by another witness?—No, that is wrong altogether, because if pigs could not be sent in crates they could go the same in trucks; and if you have a lot of pigs they would put them in trucks, I think it would be more risky, as they are more mixed up.

4200. It has had an effect on the pig traffic, but you could not say whether it has had any effect on swine fever?—I cannot say.

4201. I think you said, or I understood you to say, that these returned crates you sometimes disinfected and sometimes did not. How do you determine what crates, or what reason have you for disinfecting one crate when it returns and not another?—When I have got a lot of crates at home I give them a good washing out all together. They get rather tainted, and smell nasty, and it is not healthy for the pigs.

4202. That is, judging by the appearance when they return?—I have not disinfected for any reason that I have had to fear swine fever.

4203. I want to know whether you judge by the appearance of the crate when it returns, or whether it is from the knowledge that it has been to a place where you have reason to suspect there is swine fever? —No, it is not that I thought there was anything of that kind.

4204. It is by the appearance of the crate when it returns, if it is very dirty?—If the crate has had several lots of pigs in it, it gets very dirty, and I clean it.

4205. Would you injure your reputation very seriously as a dealer if you were known to sell diseased animals?—Certainly.

4206. And therefore it is very much to your interest to avoid having anything to do with diseased swine?—I would not send a lot of pigs away if anybody was to give me 20*l.* if I had the least idea anything was going to happen.

4207. It would injure you?—Certainly.

4208. Do you send many pigs to Scotland?—I sent a good many last year. This year they are too dear.

4209. Could you give us any information as to what part of Scotland pigs go to?—I send the most of mine into Wigtownshire.

4210. To any other part?—There are a few private places in different districts. The greater part go to Wigtownshire.

4211. But none to the more northern counties?—There is one customer at Dundee that I supply, and another at Blair Athol.

4212. Do you supply any of the midland counties—say Midlothian, Peebles, Lanark?—I do not remember at present any places except Wigtownshire and Dundee and Blair Athol. I have got a private customer at each place.

4213. Do you send any to Edinburgh?—No, I have not sent any there for three or four years.

4214. Is it principally to private customers that you send your pigs, or have you dealings with other dealers in Scotland?—The best part are sent to other dealers.

4215. Presumably in those localities that you have mentioned?—It is in Wigtownshire where I send them.

4216. The dealers are principally Wigtownshire dealers, are they?—Yes.

4217. Therefore you do not know what happens to pigs after they get into other hands?—No.

4218. Have you had any dealings with dealers in the neighbourhood of Edinburgh?—No.

4219. Or that part of Scotland?—No, not for some years.

4220. Or Dundee?—In Dundee I have got a private customer, who buys about two lots a year, perhaps.

[The Witness withdrew.

SEVENTH DAY.

Monday, 13th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. JOSEPH SMITH, Jun.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary.*

Mr. CLARE SEWELL READ, called; and Examined.

Mr. Clare Sewell Read.

4221. (*Chairman.*) You are, I think, here to-day not merely in your personal capacity, in which we would be very glad, owing to your great experience, to have your evidence, but also as representing the Central Chamber of Agriculture, the Norfolk Chamber, the Farmers' Club, and especially the Cattle Diseases Committee of your county. You speak on behalf of those bodies?—I do.

4222. Will you just tell us for what period you have been connected with your Cattle Diseases Committee?—With a slight interregnum during the time I was in the Government, which I do not think lasted much above a year, ever since it has been formed.

4223. You have therefore had a very long experience of the whole of this question?—Yes; from the days of the cattle plague, when I was on the Commission in 1865, until the present I have been mixed up with cattle diseases, I think I may say.

4224. Will you tell the Committee what the policy of your county has been upon this question of swine fever in regard to movement, slaughter, and compensation especially?—I have a return here from the clerk of our Cattle Diseases Committee which I will put in (*handing in the same*). It first of all gives the number of outbreaks from the 31st December 1879 to the same date in 1892. I think I might give you a summary of it. The number of outbreaks have been 1,881; the number of affected animals that have been killed have been 14,456, and we have attempted during two short periods to slaughter all the swine that had been herded with the diseased ones, and they amount to 2,690. The amount of compensation paid has been 8,964*l.*, and the apportioned expenses that we think we may safely charge to swine fever have been 7,339*l.* Then with regard to the regulations, if you will allow me, I will give them as they come. As soon as we started we issued regulations for cleansing and disinfecting the markets. Then in 1885, in consequence of a very large outbreak of swine fever in the county, public sales of store swine were prohibited. Then for a short period healthy swine which had been in contact with diseased pigs were slaughtered. In 1887 we made a regulation that all swine sent to sales must be accompanied by the declaration of the owner that they have been on his premises for not less than 28 days immediately preceding the date of sale, and that his premises were free from disease; and a regulation was also passed that all carts, &c., carrying pigs to market should be properly disinfected and cleansed. The local authority for Norwich made similar regulations to the above, but allowed them to expire on the 28th February 1880, without giving any intimation to our local authority. Generally speaking Norwich and Norfolk have very cordially co-operated with one another, but, in this instance, and in another similar one, they did not coincide with our ideas. Then in the year 1889 we made regulations that all healthy swine which had been in contact with diseased ones should be slaughtered. We tried that experiment again, and the regulation was made in 1889 that no store swine should be moved into Norfolk except by licence from a local authority. In the year 1889 we had 320 outbreaks, and something like 3,000 swine had to be slaughtered. Therefore we did not admit any pigs for a certain period without a licence from some local authority. Then, from 5th November 1889 to 28th February 1890, we closed again all the markets in the county except for such animals as were intended for immediate slaughter; and also provided that no swine should be moved into the county which had been exposed at any sale or market within 28 days. Again the Norwich authority did not follow us. In November 1889 fresh regulations were made for cleansing sale yards and dealers' carts, and they are in force still. In June 1891 the regulation that healthy swine which had been in contact should be slaughtered was discontinued. The only two other regulations which have been passed were, that on the 14th May 1892 we excluded swine from Suffolk, except with the declaration by the owner properly signed before a local authority, and in January of this year we had to issue a similar regulation with regard to the county and borough of Bedford. Those two regulations are still in force. We did not issue those regulations until we had ample means of knowing that we were continually being supplied with swine fever from Suffolk, because in that county they do not slaughter, and consequently do not compensate; and we know nothing about Bedfordshire beyond this, that we received three distinct outbreaks from the borough of Bedford after we were quite clear of swine fever. I think I may

say that at the present moment we are clear; I have not heard of any within the last two weeks.

4225. The borough of Bedford is looked upon with very considerable suspicion in all that part of England, is it not?—I believe it is. I have no reason for knowing why, but we certainly have suffered considerably from it, and we thought it was wise to schedule the county of Bedford as well, because we could not tell exactly whether they came from Bedford or Bedfordshire.

4226. Are there any other independent jurisdictions within Norfolk besides Norwich?—Lynn and Yarmouth. We have had no trouble with any of our boroughs, with two exceptions that I have noticed, when Norwich did not conform with our regulations.

4227. Yarmouth is a county borough, is it not, now?—Yes.

4228. And so is Norwich?—Yes.

4229. From what you have said may we take it as your view that the great cause of the continued existence of swine fever is the multiplicity of jurisdictions, and the want of uniformity of regulations arising therefrom?—Yes. I may say that we felt that so keenly, that about three years ago, I think it was, we called an East Anglian Conference at Ipswich to see if we could not have some definite uniform regulations for the eastern counties and for the boroughs therein. The first resolution was proposed by the county of Norfolk, that all swine affected with the disease should be slaughtered. That was rejected; consequently all our other schemes fell to the ground, with one trivial exception, which, I think, was carried unanimously, and that was, that all pig dealers should be licensed. I do not particularly know why myself. I am not aware that a licence makes people more truthful or anything of that sort, but it was considered that you would have more authority over them, and the local authority would have a better chance of getting at these men if they were licensed.

4230. That was a licence in regard to pig dealers?—Yes. It was very disheartening to us in Norfolk; we thought that we should have carried the slaughter of swine that were diseased pretty well unanimously. But a large number of the boroughs and the county of Suffolk voted against us, and we were in a minority.

4231. Do you find the pig dealers in Norfolk and the adjacent counties troublesome people to deal with in regard to your regulations?—They are the most troublesome of our class of people that we have to deal with, and I do not doubt that they very often evade our regulations. We have had a few prosecutions, and we have generally succeeded in convicting them. We have had two or three troublesome people up before our Committee, and we have frightened them, I think, by telling them that the police and the inspector would keep a watchful eye upon them.

4232. Have those prosecutions been for bringing pigs in which were apparently suffering, and perhaps diseased, knowingly, or were they for breaking regulations about cleaning carts and things of that kind?—Generally speaking, I think, the prosecutions have been for selling unhealthy pigs that they ought to have known were diseased. That is the most frequent cause.

4233. You have mentioned the subject of licensing; now we have had some suggestions from previous witnesses that licences might be required, not merely from pig dealers but from pig keepers, and conditions laid down in regard to the position and size and sanitation of places where pigs are kept. Have you ever considered that question?—I think that is a sanitary question that is generally dealt with very stringently by the various sanitary authorities in the county of Norfolk, the boards of guardians.

4234. Do you think the sanitary regulations are carried out sufficiently?—I think they are. In the towns they are very strict about where the pigs should be. In the country we do not care very much so long as they are not too near a cottage.

4235. Mostly the urban authorities, I understand from you, have made bye-laws and enforce them?—I apprehend they have; I am not in a position to say so.

4236. I suppose it is your view that unhealthy and filthy conditions tend to keep up the disease although they do not create it?—Most certainly; and there is also the great difficulty in disinfecting some of these pigsties, which are very badly contrived and certainly, for the health of the pig and its comfort, might be very much improved.

4237. I understand, then, from your evidence thus far that you would like to see the whole dealing with this disease transferred to the Board of Agriculture, or some central authority?—Certainly.

4238. You would follow, I suppose, the lines of the Pleuro-Pneumonia Act?—I think almost identically.

4239. Has the action with regard to pleuro-pneumonia been successful in your county?—Marvellously. I should think we had pleuro for 40 years. Every autumn we used to be deluged with it from Ireland, and it is a most remarkable fact that they have had only one outbreak of pleuro-pneumonia in the county of Norfolk since the Board of Agriculture took over the suppression of it. That was in the first week of September 1890. I glean from that that the law is now thoroughly well enforced in Ireland. It certainly could not have been before, because we never were an autumn without an outbreak clearly traceable to Irish cattle. I think you are aware that we graze an enormous quantity of Irish stores; they come to us principally in the months of October and November to be stall fed. It used to be an idea on the part of Norfolk graziers that the disease was created in the holds of the vessels, and the head of the Veterinary Department in Dublin in the year 1876 charged the Norfolk farmers with creating pleuro-pneumonia by keeping cattle in loose boxes; and it was on account of my protesting against that theory being accepted generally that I had to resign my post in the Government, which was a very trifling matter, but still it is now proved that I was right and somebody else was wrong. I think it is most remarkable that we have had no outbreak for three years. I cannot understand why we should not accidentally have come across a case or two; but absolutely since September 1890 we have not had a single case, and I am quite sure we never had a year without an outbreak. Perhaps I am wrong in stating that; I think after the cattle plague for almost a year we had no outbreak of pleuro-pneumonia.

4240. Are many Irish or foreign pigs imported into Norfolk?—Certainly not; none whatever.

4241. You said just now that you would substantially adopt the same plan in dealing with swine fever as that which is now adopted in dealing with pleuro-pneumonia. Are there any variations with regard, for example, to the appointment of inspectors and matters of that kind which you would suggest; we have had some evidence from previous witnesses on those points?—The Board of Agriculture, I believe, appointed a valuer in Norfolk, who thought he would make a very good thing under the Pleuro-Pneumonia Act, and he has only had that one case, poor man, so I fear his expectations have not been realised. But I apprehend there would be very little difficulty in getting proper valuers in the county of Norfolk, and I suppose they would make use of our inspectors.

4242. Would you leave the appointment of the inspector with the county authority, or give it to the Board of Agriculture; and as regards the payment of his salary, for example, on what funds would you charge the payment of the salary or the fees?—I think it ought to be paid out of the Imperial Exchequer, if any particular inspector is appointed; but I apprehend they would make use of our

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inspectors, and that when they did so they would have to pay them.

4243. Would you pay, do you mean, on the case; would you not have to pay a salary?—We do not pay a salary. We do not give a retaining fee even to our head inspector. We always pay by the case and by the mileage.

4244. Are you satisfied with the present scale of compensation?—I think so.

4245. You have no suggestion to make in regard to any alteration?—No. I have heard some people say that you should extend the limit in case of valuable animals, and I think perhaps when you come to pedigree pigs you ought to extend it. Just now the price of pigs is so great that possibly the limit is too small, but generally speaking I think it is fair.

4246. (*Professor Brown.*) I think you said that in 1876 the head of the Veterinary Department in Dublin charged the Norfolk farmers with creating pleuro-pneumonia by keeping cattle in loose boxes?—Yes.

4247. In the ordinary feeding boxes?—Yes; he said that they stood upon the manure, and the manure heated and engendered the disease. That was his theory.

4248. It probably occurred to you at the time that it was a common practice to keep cattle in similar boxes all over the country?—More in Norfolk, perhaps; but I believe they are kept, if anybody takes care of them, in that manner.

4249. Certainly the whole time of my residence in Gloucestershire at the Agricultural College Farm they were fed regularly there, and during the 13 years there was no case of pleuro-pneumonia?—Quite so.

4250. In reference to the employment of inspectors, I understood you to say that the local officers would be employed as they were in pleuro-pneumonia, when necessary, and that if they were so employed the Board would pay them?—We had only that one case of pleuro in Norfolk since the Board took over the extinction of that disease, so that I do not know really what they do; but I should have thought what they do now they would continue to do in future.

4251. You would recognise it as a fair business principle that the local authorities should pay their inspector, when they employ him, either by salary or fees, and that if he is taken off for a particular purpose by the Board of Agriculture in an outbreak, for example, of swine fever, the Board should pay for the services which they order him to render?—I think so, certainly.

4252. That was done all over the country in pleuro-pneumonia?—I think we have such a good staff of organised inspectors that it would be for the advantage of the Board of Agriculture to use them rather than appoint fresh ones; that is my opinion.

4253. It would be a matter of great difficulty, would it not, for the Board of Agriculture to select inspectors all over the country?—I should think very much so.

4254. And further than that, they would in every case only want them for a comparatively limited period?—Quite so.

4255. Do you consider that an advantage would arise if the Central Department were to take charge of the disease as they did in pleuro-pneumonia?—I am quite sure it would if they administer it in the same way.

4256. You would not bind them to adopt the exact system which they have adopted in pleuro-pneumonia under the Pleuro-Pneumonia Act?—I should think the same principles would guide them; that is to say, slaughter and compensation.

4257. Certainly, but in matters of detail the two diseases would require, of course, very different treatment?—I should apprehend swine fever is more akin to foot and mouth than it is to pleuro-pneumonia, and would require the treatment that you would adopt in the case of foot and mouth rather than in the other.

4258. But assuming that the Board were charged with the disease, they would, as a matter of course, deal with it as a specific affection, in the way that they were advised by their veterinary officers?—Certainly.

4259. And they would not necessarily follow exactly the same plan as was followed in pleuro-pneumonia?—I should imagine not, but I am no authority whatever on that point.

4260. I asked the question because there is a general impression that it would be quite sufficient in introducing a Bill to say that all the provisions relating to pleuro-pneumonia shall relate to swine fever?—I should think they would, as far as the Act goes, almost; and that the difference in operation would be made by your orders here.

4261. That is to say, that you would give the Central authority power to take such steps as they thought most expedient?—Quite so.

4262. And pay the costs?—Yes. I do not see how you could embody that in an act of Parliament very nicely. I am sure it ought to be carried out by the orders of the Board of Agriculture, rather than by an Act.

4263. (*Sir Jacob Wilson.*) Is it your opinion that fairs and markets are fruitful sources of disease?—I do not think when they are well regulated that they ought to be.

4264. I suppose your answer then would be, "Yes," unless special precautions are taken?—Yes, or the other way. I say "No," if proper precautions are taken.

4265. In Norfolk, you have large markets at Norwich, Lynn, Dereham, and Fakenham, I believe?—Yes.

4266. Are these markets specially provided with means of disinfection and other sanitary precautions?—Some are, and some are not, I think, but we insist upon all large markets being paved and properly disinfected. The city of Norwich is really altogether out of our jurisdiction.

4267. Are any of the officers employed by the county also employed by the borough?—Our chief inspector is the inspector for the city of Norwich, and I also fancy that Yarmouth has the same inspector as we have.

4268. By what means are pigs generally conveyed to these markets, especially to Norwich, by road or by rail?—A good many of them come by rail, but the majority of them come by road, and in dealers' carts.

4269. At what time in the morning does your market commence at Norwich?—Not before 10 o'clock, I should think—9 or 10 o'clock.

4270. Am I right in assuming that the average supply of pigs in Norwich Market is something like 600 per week?—Yes, I do not think it often reaches 1,000, but I have not the statistics of the Norwich market by me.

4271. Are you aware whether, within an easy reach of the market of Norwich, there are lairs especially intended for pigs?—There are some lairs in the city, and also near the railway station.

4272. In the towns?—Yes.

4273. Are you aware whether these lairs in the borough are under official inspection?—I am sure that our inspector, who acts jointly for the county and the city, does inspect them.

4274. These lairs are on a very large scale, are they?—No, not a very large scale, I think.

4275. Are they generally attached to public-houses?—I suppose they would be.

4276. Where the carts would naturally put up for the day?—Yes.

4277. Do you know that there is a lair at the "Buff Coat" public-house?—No.

4278. Do you know that there is one at the "Lion Inn"?—No, I know very little about the interior of Norwich.

4279. Recognising the existence of these lairs outside the markets, which are not altogether under the control of the market authorities, would you think it possible that sales and purchases took place within those lairs without the pigs being taken into the market at all?—I daresay they do, but not to any great extent, that is to say a man may bring his pigs into these lairs, and some dealer may come in and buy them, and take them into the market; and the same thing may happen when a man brings pigs out of the market and puts them into the lairs. But, what we had to contend with some time ago, when we shut up the market, was the sales that did take place just outside the jurisdiction of the market authority, close to a railway station—a sort of a bye-market, very soon crept up.

4280. Do you not consider that where such lairs cannot be inspected, they may account for many of the mysterious outbreaks of disease that have taken place throughout the country?—I should think it very likely.

4281. I am sure we should like to have your practical opinion upon this. Can you suggest any means whereby this state of things could be met in the future, and this danger avoided?—A dealer brings the pigs, possibly to Norwich, overnight, and they must lodge somewhere, and they are put into these lairs, I apprehend. Then when they buy the pigs in small lots in the market, the large dealers, I suppose, drive them back into these lairs, but generally speaking the common run of dealers bring the pigs straight to the market in their own carts, and deposit them in the pen and take them out. They are more for the collection of pigs that are to go away in large quantities, or that come in large quantities.

4282. Recognising the existence of this danger, I should still be glad to know whether, in your opinion, in any future Bill or Order dealing with this question through a Central authority, as you have recommended, power should be taken to deal with such cases?—I do not quite apprehend what you mean by dealing with them. If you mean the power of the inspector to see that they are properly cleansed and disinfected, or that they are being properly paved, I think that should be done; but you must have these places.

4283. Would that power apply whether pigs are shown in a market, lair or other place?—Yes.

4284. (*Professor Brown.*) Are you aware that the present Acts do not empower a central authority to intervene, excepting in cases where markets are held; are you aware of that?—No, I do not think I am.

4285. The real difficulty is the allegation on the part of the sellers, that when a market is prohibited, and they sell their pigs or other animals at a railway station, or in the public streets or roads, they are not holding a market?—Yes.

4286. Would you consider, in the ordinary way of business, that that allegation is reasonable?—Certainly not. They have no right to hold the market.

4287. You would contend that that is holding a market?—I should think that is holding an illegal market. That is what we tried to stop when we closed these markets throughout the county.

4288. Did you succeed in any attempt to stop those sales on roads and at stations?—Yes, we did, with the co-operation of the railway company.

4289. But you did not bring any action against the persons who sold animals in that way?—No.

4290. So that it still remains doubtful what view the justices might take as to whether that mode of selling was really holding a market or not?—If I remember rightly some of these townspeople, I forget whether they brought an action or whether they summoned a man, but what they said was, that it was depriving them of their tolls. That was the ground that the town took of it, but we had no prosecution that I remember, as a local authority of the county of Norfolk.

4291. But supposing that their legal advisers are correct, and that we have not the power to prohibit anything but the holding of markets—in other words, that the central authority have no power to prohibit buying and selling—would you think it desirable to obtain such power?—Certainly.

4292. (*Sir Jacob Wilson.*) Do you believe there has been much fraudulent concealment of disease in Norfolk?—I fear that with a certain class of small dealers there has been a good deal.

4293. Are you very particular in Norfolk in tracing the origin of the disease in case of an outbreak?—We do our very best, particularly now we have so few cases. We did not take very much pains when we were very full of it; it seemed to be everywhere.

4294. Is that done through the police?—It is done through the police and the inspectors.

4295. Is swine fever regarded as a very serious disease by the farmers of Norfolk?—I think it has so frightened a great number of farmers that they have given up breeding pigs to a certain extent.

4296. Are you aware that the pig population of Norfolk, taken altogether, has decreased?—Yes, this year.

4297. Do you receive any pigs from Bedfordshire into Norfolk?—They come from Bedford market, certainly; I do not think they come from Bedford market so much to the markets as they do to private individuals.

4298. Are those supplied by agents in Bedfordshire, or are they obtained by dealers from Norfolk?—I believe there is a good deal done by advertisements, somehow or other. Small pigs, two or three at a time, are sent to different people from Bedford. We have had complaints about Bedford; but Suffolk is our chief offender, because it is so near us.

4299. Was it in consequence of your dread of receiving pigs from Suffolk that you endeavoured to come to terms with the county authorities in Suffolk?—We thought it was very strange that two counties that were purely agricultural, like Norfolk and Suffolk, should take such very opposite views as to dealing with this disease.

4300. And that pointed very strongly to the unfortunate consequence of a want of uniformity throughout the country?—It did.

4301. Are disinfection and preventative measures generally adopted throughout the county, do you believe?—We always insist upon it.

4302. Do you insist upon it, whether the disease is in existence or not?—Do you mean in the case of the keeping of pigs in a man's own premises?

4303. Disinfection I said as well; these precautions are taken, both on the farms, and at markets, and railway stations?—On farms only in case of disease.

4304. Then with regard to carts and crates, and such matters, they may go into other counties and come back again without being necessarily required to be cleansed or purified?—That is so. We have regulations for disinfecting dealers' carts at markets, and that sort of thing, but there is no attempt to disinfecting farmers' premises unless disease exists there. We have not, I think, found very great difficulty in disinfecting them.

4305. In any outbreak of swine fever in Norfolk, have you ever had an instance where you thought it necessary to destroy the pig-sties?—No, we have never done it; but I think it would have been cheaper almost to have pulled down some rubbishly, ill-contrived, dirty pig-sties. I think it would have paid.

4306. It would have been a more economical method of procedure on the part of the local authorities if they had adopted such a plan, even by the payment of compensation?—I think so. The manure is a thing that some people fancy conveys the contagion; but we have not found that, if it was thrown up in a good heap and the outside thoroughly disinfected, for of course the inside would ferment very rapidly and create heat. We have not

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therefore, as a rule, found that it has been spread by the manure.

4307. Am I right in supposing that in your opinion you do not recognise any great difficulty in getting rid of swine fever under certain conditions?—I think that the Central authority will find it very much more difficult than they have in the case of pleuro-pneumonia, because if I apprehend the nature of the disease, it is so akin to the foot and mouth, in that it may be spread by so many means, that it is different from pleuro-pneumonia.

4308. But seeing that the central authority have been instrumental in ridding the country, we hope, from both pleuro-pneumonia, and foot and mouth disease, you could feel every confidence that they could also be successful in dealing with swine fever?—I do, provided that they have stamina enough to carry it out in the same way that they have done pleuro-pneumonia.

4309. To sum up your recommendations, am I right in this: that you desire to see the outbreaks of swine fever dealt with by the central authority in this way, by compulsory slaughter, by payment of ample compensation, by judicious restrictions on movement, and by improved sanitary precaution?—Yes. I hope I shall live to see that.

4310. And that thus you would expect to see the disease exterminated from the country under such conditions?—Yes. I have no belief myself that it is otherwise than a contagious disease, and cannot originate spontaneously.

4311. (*Mr. Joseph Smith.*) Can you tell us anything about the action of Suffolk?—I know they do not slaughter and I do not wish to ask any further question.

4312. They have not slaughtered for many years?—No, I do not think they have; and the consequence is that they say they have no swine fever, but the truth of it is they are so full of it that they never hear anything of it.

4313. In your county you have always slaughtered I understand?—We have always slaughtered.

4314. At least for the last 12 years?—Yes.

4315. And sometimes you have slaughtered animals in contact as well as others?—Yes.

4316. Do you attribute your comparative freedom from disease now to the slaughter?—The slaughtering and our regulations, I think.

4317. You have not slaughtered the contact ones?—No; we have isolated them very strictly.

4318. For how long?—That depends upon the report of our inspector—possibly for three months. We find the best thing is to clear the whole place out if we can, and to prevent any pigs going into that pigsty or yard for six months.

4319. (*Sir Jacob Wilson.*) Six months?—Yes; I think that should be, if possible.

4320. (*Mr. Joseph Smith.*) Have the outbreaks come from outside the county, or have they been spread within the county?—Recently from without the county. In the years of 1889, 1890, and 1891, we had a good deal of it in the county.

4321. In 1890 you had a good many cases?—Yes; and also in the years 1885–6–7, down to 1889, we had a good deal of it in the county, and you could not say that it was imported, although I have no doubt that we did receive a good many diseased pigs from other counties.

4322. You talked just now of cleaning the dealers' carts and disinfecting dealers' carts; have you any power to do that?—I do not know.

4323. Do you find any objection on the dealers' part to its being done?—I do not know whether they have objected. It was done.

4324. Where do the pigs that come to Norwich go to?—A great many of them go to Yorkshire. The fat pigs that are sent away go in great numbers to the North, and then a good many of them go down into Wiltshire, and come back to us as Wiltshire bacon. So we have established a bacon factory to save the pigs the long journey.

4325. (*Mr. Stephenson.*) Do you think it is possible to get uniformity of action of all the local authorities in the kingdom?—Certainly not.

4326. Quite impossible?—Impossible. Bend them as you like, you cannot get them to act uniformly.

4327. If there was a uniform law, by which all diseased and in-contact pigs were slaughtered and paid for on a liberal scale, and there were proper restrictions upon movement, with disinfection, do you think that would exterminate the disease from the kingdom?—I believe it would in time.

4328. But it would have to be done by the central authority?—It must be done by the central authority.

4329. There are no Irish pigs, I think you say, being sent to Norfolk?—No.

4330. Why did your authority cease to slaughter in-contact pigs?—Because we could not find that it made any difference on the progress of the disease. The returns are most unsatisfactory and complex; they do not tell us anything hardly why we should slaughter them.

4331. Was it to save the money that you did not slaughter, or was it because you were not exterminating the disease?—We have never been hauled over the coals by the county council or quarter sessions on the score of spending money, I am happy to say, in Norfolk; but we as a body—that is to say, the committee—thought that we did not make any satisfactory progress with exterminating the disease by the slaughter of the in-contact animals.

4332. I take it that you kept the in-contact pigs isolated?—Yes.

4333. And shut up?—Yes.

4334. Can you tell me how many of these pigs contracted the disease and died or were slaughtered?—I should think nine out of ten.

4335. Therefore you saved £2 a head, is that not so, upon every one of the in-contact pigs that you did not kill?—No.

4336. That is to say, if you had slaughtered these pigs you would have had to pay full value up to £4?—Yes.

4337. If they afterwards became diseased and were then slaughtered, you only paid half value?—Half value.

4338. Therefore, it was a considerable saving of money apparently, but you did not get rid of the disease at all?—I beg your pardon; the owners invariably killed them if they were marketable pigs.

4339. Made them into bacon?—Yes, if they were at all worthy of being sent to market, they were killed and sent to market.

4340. As dead carcases?—Yes.

4341. But nine out of ten of the in-contact pigs, if left alone, died or became diseased, at any rate?—I think I may say that is so; that is what I put it at from my memory, which is not very good on the point.

4342. (*Mr. Wardlaw Ramsay.*) You clearly attach great importance to restrictions on traffic. You would, therefore, consider it, of course, necessary or advisable to prohibit the export of pigs from an infected county or district?—Yes, I certainly should, from a certain district; but we have not absolutely prohibited pigs coming now from Suffolk. What we say is that they should bring a declaration that they have been in the possession of the owner for 28 days, and not been herded with any diseased pigs, and that is signed by a member of the local authority of the county of Suffolk.

4343. I meant more in the event of the control being taken over by the Board of Agriculture, would you consider it necessary to prohibit the export of pigs from an infected district or infected county?—If they do not make the district too large, I should think that it would be right, but I should not like a

very large district to be scheduled in consequence of one outbreak in a particular spot.

4344. Do you consider large areas essential?—Not at all. I think they are a great mistake.

4345. Then would you consider it advisable to prohibit the export of pigs from a non-infected county?—No, certainly not.

4346. You would place no restrictions on a non-infected county?—None whatever.

4347. I was not quite certain whether you said that you thought a system of licensing piggeries was possible. The question was asked, and I was not quite certain what the answer was?—As to piggeries I should not think that was at all necessary.

4348. Nor the licensing of pig dealers?—That is a point on which I have not made up my mind; but as to piggeries, I think that they are fairly looked after by the sanitary authorities. As far as regards their situation, I do not think they care, if they are out in a field, how dirty or ill-constructed they are.

4349. Sir Jacob Wilson, I think it was, alluded to lairs. These lairs, I presume, are absolutely essential?—You must have some sort of place in which to collect them before and after a market—a large dealer would have that.

4350. Would you propose to adopt a system of licensing these lairs, or placing them under the market regulations?—Yes, I would do that.

4351. Which? Do you think they should be licensed?—I think they should be under the control of the market authorities, and that they should grant a licence when they think they are suitable.

4352. And otherwise they should be illegal?—Yes.

4353. (*Sir Jacob Wilson.*) Would you make any distinction between lairs attached to and contiguous to the market, and lairs belonging to private individuals and those belonging to a public house?—I think they should be all inspected and all licensed.

4354. (*Mr. Wardlaw Ramsay.*) This question I should like to put. Supposing that an owner has a lot of pigs in one of these lairs and that he was to dispose of these pigs to a dealer or to another party without their leaving that lair, not necessarily on the spot, how would you prevent such a sale from taking place?—I do not see how you should.

4355. You could not?—I do not see if the place is properly kept that it is necessary.

4356. You think that the system of it being placed under the control of the market authorities would cover all that difficulty?—It would not have anything to do with disease, but it might be a question for the market authority to say whether they should have the tolls.

4357. It was with a view to prevent the possible spread of disease by its being impossible to detect it or control it. Then, with reference to the traffic in pigs, I suppose it is pretty well over the whole year, or is the traffic in imported pigs into the county greater at one time of the year than at another?—It is generally rather more after harvest, when pigs are bought for the purpose of shacking the stubbles; there may be a large quantity then; and there would be a larger quantity of fat pigs going out of Norfolk during the winter than in the summer.

4358. Is the pig population, if we might use the word, pretty universally distributed all over the county, or are they at large centres principally?—The history of a pig in Norfolk, I do not know whether it is usual in large arable districts, is generally this: that the small farmer breeds the pig, the large farmer stores him, and a large quantity of them are grazed by millers and people of that description who use their offal and and other cheap food for the purpose of making pork.

4359. I suppose pigs in some cases are kept in large numbers?—Yes, some people keep a great many.

4360. What do you consider a large herd of pigs?—We had a man in Norfolk about six months ago who bought one pig and put it in a herd of 134, and I think they all died.

4361. Would 134 be considered a large herd of pigs?—Yes, he was not a large farmer, but he is a man who is fond of pigs more than I am.

4362. Is it your experience that those who systematically breed their own pigs suffer as much from swine fever as those who merely import stores and fatten?—I should think those people who deal in pigs are more liable to it a great deal.

4363. It is the breeders I wanted to know about; those who breed their pigs have not so much intercourse with the outside world?—I breed my own pigs and I have never had disease but once in the 12 years, and therefore I suppose I may consider myself fortunate. I may perhaps illustrate it in this way: All my men come and bother me for pigs. I say, "Why in the world don't you go to market and buy "your pigs." "Well, sir," they have said, "we know "yours are all safe, and we cannot tell if they are "at market."

4364. Therefore you think the breeding of pigs is some protection; the pig breeder is more safe than a man who does not breed, who buys his pigs as stores and fattens them?—Certainly. I have known a great number of people who will not go to market to buy a pig.

4365. Is it your experience in Norfolk that outbreaks have recurred in the same place?—Not precisely on the same premises so much as in the same locality; but we have had two or three instances in which dealers have been exceedingly troublesome, and they have had repeated outbreaks upon their premises. I cannot say that, with the farmer generally, if he has one outbreak, you have another outbreak there as a matter of course.

4366. (*Sir W. Kaye.*) You referred to the late Professor Furguson having made some objection to the way in which the Norfolk farmers keep their cattle?—Yes.

4367. Are you aware that Professor Furguson was at that time a man of the highest eminence in his profession?—I believe he was. Might I also say that I have heard eminent veterinary professors say that foot-and-mouth disease came up with the north wind.

4368. You think the most eminent men may be mistaken?—Yes, I have heard that said within the last 25 years by eminent veterinary professors.

4369. You have said that in the year 1889 you slaughtered animals in-contact?—Yes, we did.

4370. And that you issued an order prohibiting the admission of pigs into your district?—Yes, for a limited period.

4371. I think you said that afterwards in 1891 you discontinued that?—We did.

4372. Why did you do that, upon what ground; had the Slaughter Order worked well?—I will give you the figures if you will allow me. In 1889 there were 320 outbreaks, 2,181 pigs were killed that were diseased, and 547 (after we issued the order) healthy ones. Then in 1890 there were 149 outbreaks, 906 diseased pigs were slaughtered, and 982 healthy pigs. In 1891 there were 184 outbreaks, 1,282 diseased pigs were killed and 797 healthy ones.

4373. What orders have you in force now as regards slaughter?—We have no order except that of killing all animals that are affected with the disease.

4374. Then at present you do not act upon the principle of killing the animal in-contact?—I am sorry to say we do not.

4375. You seem to be entirely satisfied that the action of the Board of Agriculture with respect to pleuro-pneumonia has been entirely successful?—Marvellously so, in the County of Norfolk.

4376. Are you aware that the Central Authority of Dublin followed exactly upon the same lines, as far

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as they could, with respect to Ireland as the Board of Agriculture laid down for England?—I have heard so and I believe it is true.

4377. Are you aware that there has not now for a period of nearly six months been a single outbreak of pleuro-pneumonia in Ireland?—I have heard that.

4378. You have no reason to disbelieve that, I suppose?—No, I have no reason whatever to disbelieve it. It only proves, I think, what I have said, that Dublin dairies were the hotbed of the disease, and that we, importing such a large quantity of cattle that were exhibited in the Dublin market, of course come in for more than our full share of it.

4379. But you have not that complaint to make since this action of the Board of Agriculture and the Irish central authority with respect to this matter?—No.

4380. (*Professor Brown.*) You have said that you think large areas are a mistake?—Yes, I do.

4381. Are you not aware that for 10 or 12 years the system of small areas was tried under the advice of the local authority and entirely failed?—They were very small areas, were they not?

4382. We could not tell, because the boundaries were fixed by the local authorities, and we, of course, accepted their boundaries?—What I would refer to in regard to large areas is this: there is an enormous amount of inconvenience and loss to the inhabitants of those areas.

4383. Undoubtedly, but at the same time that system of declaring large scheduled districts, coupled with other measures, has succeeded in getting rid of at least one disease?—I am not aware. Of course I do not know that from my own experience. When the Board of Agriculture slaughtered the cattle that were diseased in September 1890, they did not schedule the county of Norfolk. They simply had about the same limited area that we should have, at least I fancy they asked us what we should do, and we told them that we thought if they had a certain limited area it would be sufficient, and it was adopted.

4384. That was probably on account of the fact that there was very little disease at the time in Norfolk?—There has been none since, so there could not have been very much then, I should think.

4385. That would explain it, would it not?—Yes.

4386. But in cases where it is known to exist in several counties, and it is propagated by the trade from those counties in several more, would you see any great objection, I mean from the point of view of getting rid of disease, to including all those counties in one scheduled district?—I am no authority on that point.

4387. But your opinion is that it is highly inconvenient to the persons concerned?—Very highly inconvenient, and you would raise such a storm of indignation against you that you could not carry out your orders.

4388. (*Sir Jacob Wilson.*) Must not the question of size of area always depend upon the local circumstances and surroundings of each case?—Yes, I should say so, most certainly. There is a matter I should like to allude to, if I may. The Cattle Diseases Committee of the Central and Associated Chambers of Agriculture have presented several reports to the council, which have been, all of them, adopted. There is one clause in the report presented in March 1892, now just 12 months ago, to which I would refer. The then President of the Board of Agriculture desired the central chamber, among other agricultural bodies, to give him information on three points. They were, first of all, the provision of the necessary funds by the Chancellor of the Exchequer; the willingness of Scotland and Ireland to agree with England; and (this is the one that really affected us) the probability of the Board of Agriculture being effectually supported if it should take in hand the work of stamping out swine fever. That I consider to be a very important question. It was put to me at the deputation by Mr. Chaplin, and I said that I thought I should be very presumptious if I were to answer it off hand, and that it ought to be considered by the Chambers of Agriculture. This was their recommendation and their opinion: "That as regards this "last-mentioned point on which alone your Committee "is competent to express an opinion, they feel con- "fident that the farmers of this country will do all in "their power to support the Board of Agriculture in "carrying out the policy recommended by the deputa- "tion." I most cordially approved of that at the time, but I must offer very respectfully a word of caution if I might do so. That support will not be granted if there is to be a change of policy in the way in which you are carrying out your powers. The case at Hastings where you had no slaughter for foot-and-mouth disease has caused most unbounded dismay amongst the agriculturists of the kingdom. The popularity of the Board and the confidence in the Board is gone. You seem to have no continuous policy, and you seem also in this small instance, where the maximum of slaughter could not have been much, to have put on maxima of restriction and isolation, which has very much exasperated the people round about there.

4389. (*Chairman.*) The conclusion that you are desiring to urge upon the Committee is that if a similar policy is pursued in regard to swine fever it might cause a reaction against the changes which otherwise you would support?—Just so. What I want to impress upon the Committee is this: that if there is to be an entire approval and support on the part of the farmers of England for the suppression of swine fever by a central authority, that central authority must take up a decided course, and must stick to it.

4390. You alluded just now, in your answer, to something that had happened near Hastings; do I understand from you that the Board of Agriculture in that case in dealing with the foot-and-mouth disease, prohibited movement, but did not order slaughter and compensation?—That is so.

4391. What is the date of this order at Hastings to which you allude?—The other day.

4392. (*Professor Brown.*) I gather from you that there is an impression that in not slaughtering the animals with foot-and-mouth disease at Hastings the Board of Agriculture changed its policy as compared with the action which it took in regard to the outbreak which began last spring?—It did. We did not think so; it did change its policy.

4393. That is to say, you conclude that they stamped out or got rid of the disease during last summer by a policy of slaughter?—Yes.

4394. Then you are not aware of the fact that of the 6,500 or 6,000 odd animals attacked, only 500 odd were slaughtered?—Yes, I am perfectly aware of that, and I know too well that if you have an outbreak of any of these diseases in a small way you ought immediately to slaughter. After it is spread over a large district you cannot slaughter; but when it has died down to a small amount again then I think it is your policy to slaughter.

4395. Then you do understand that the Board did not slaughter universally in foot-and-mouth disease last summer?—Yes, and they were perfectly right, but in the last outbreak they are essentially wrong.

4396. You are speaking of this particular case?—Here is a case where there were very few animals, and I submit that it was the bounden duty of the Board to have slaughtered the whole of those animals.

[The Witness withdrew.

Mr. THOMAS DUCKHAM, called in; and Examined.

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4397. (*Chairman.*) You live in the county of Hereford?—Yes.

4398. You were one of the Members of Parliament for the county of Hereford at one time?—Yes.

4399. And you are a member of the County Council, I think?—Yes, and chairman of the Cattle Diseases Committee of the county.

4400. You are, I believe, aware that the subject of this inquiry to-day is as to the best method of stamping out swine fever?—Yes.

4401. Will you kindly, in the first instance, tell us what policy has been adopted in your county by the committee of which you are chairman?—Keeping the county strictly closed to swine from other counties except by license, for the purpose of breeding or slaughter. The borders of my county are very serrated and over-lapping, and there have been some special licences granted to a man who was farming on one side of the hedge in Worcestershire, and the other side of the hedge in Gloucestershire, and merely to enable his animals to cross the road we are obliged to relax a little in our arrangements there.

4402. You have a great number of towns which are market towns just outside the limits of your county, have you not?—Yes, we have.

4403. I understand you to say that you have got now orders out restricting movement against all your neighbours; is that the case?—Quite so, and have had for several years.

4404. What have you done in regard to compensation and slaughter?—We pay half price for animals killed when suffering with disease, and the full market value for those killed that have been in contact.

4405. What has been the result of that policy? Have you been, on the whole, fairly free from swine fever?—Yes. We have had, unfortunately, some outbreaks occasionally; there have been very few, and I have no doubt they were surreptitiously brought into the county.

4406. Have you been able to trace any of those outbreaks?—We have not. Pig dealers are very unprincipled men as a rule, and a county is a large area; and unless you have an efficient force of police you cannot keep a strict cordon.

4407. I suppose they manage to get out of these market towns outside your county into your county?—Yes.

4408. And you have not always been able to control that movement?—No, we have not.

4409. What have you done in regard to disinfection of markets, carts, and so on?—Where an outbreak has taken place, every portion of the premises where the pig has been, has been thoroughly disinfected, the bedding burnt or buried (and covered with lime if buried), and animals all covered with lime when buried a sufficient depth. We have never had a single case where the disease has extended.

4410. In regard to dealers' carts, what have you been able to do?—We do not have them that I know of. We have never had anything to do with them.

4411. Notwithstanding the rather stringent policy which you adopted, you have, nevertheless, not succeeded in stamping out swine fever entirely?—Certainly we have; as soon as an outbreak has taken place we have killed.

4412. I do not think you quite follow my question. You have not succeeded in preventing outbreaks of swine fever; they have from time to time originated in your county, or come into your county?—That is what I say; they have, I have no doubt, been brought surreptitiously into the county.

4413. Have you any suggestions to make by which a better state of things could be introduced?—If other counties adopted the same principle that we have done, my belief is that the nation would be free from swine fever.

4414. As a matter of fact, it is within your knowledge that they have not?—Yes, it is within my knowledge that the country is not free. The difficulty is to get so many local authorities to adopt one principle.

4415. What is the conclusion you draw from that?—That the Government should adopt the same principle for swine fever as they have done for pleuro-pneumonia.

4416. You are, in fact, in favour of a central authority dealing with the question?—Yes. A central authority in my county is adopted, and it works extremely well. The city authorities work loyally with myself and other members of the committee. We have a joint committee.

4417. What independent jurisdictions, if any, in regard to cattle plague are there in Herefordshire?—We have only two; we have only the city, now, and the county. Formerly there was one at Leominster, but now, under the Local Government Act, we have but two authorities. There have been some very severe cases occur in the city. A butcher, it is supposed, bought some animals in the market with disease latent in the system, and 70, or 80, in one case, and 100 in another case which were kept on the premises have been slaughtered and buried, and there has been no further trouble, no further outbreak.

4418. When an outbreak takes place, and a Prohibition Order on movement is issued, what is your view in regard to the district or area, as to the size, which that Order ought to cover? There has been a good deal of conflicting evidence given here on that point?—Our rule has been to establish a place with a cordon of about half-a-mile radius from the centre of the outbreak.

4419. You are then, practically, in favour of a large area; I suppose you would call half-a-mile a large area, would you not?—Yes.

4420. And you have not found the discontent in the locality too great to prevent such Orders being effectually carried out?—Certainly not; we take a line of road, if we can, as near as possible, and then place notices up and they have been loyally obeyed by the inhabitants of the neighbourhood.

4421. Now I believe it is the case that you have had prosecutions under the Cattle Disease Acts?—Yes.

4422. For breach of what regulations have those prosecutions taken place?—We have prosecuted very many of the parties for bringing pigs into the county against the regulations, and fined them.

4423. In those cases you have, I suppose, to a certain extent been able to trace the origin of the outbreak, and to ascertain whether they came from other counties?—We have not been able to trace the origin, but when they have brought them from other counties where the disease is we have punished them for bringing them in, because our orders are that they shall not be brought in except by licence, and they must produce the licence.

4424. Perhaps I used the wrong word when I said "origin"; I meant the place from which the infected swine came; have you been able to trace it so far?—We have not been able to trace any outbreak to another place.

4425. I quite understand now; you have been able to find where the diseased pigs come from, but you have not been able to account for the origin of a new outbreak in Herefordshire by connecting it with any other county?—Just so.

4426. Has it occurred to you that more stringent

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measures might be taken with reference to sanitation in regard to pig-sties ?—Most decidedly.

4427. On what authority would you place the enforcement of such regulations ?—I had an interview with the superintendent of police from Leominster on Saturday ; they had an outbreak in the borough on a butcher's premises. He told me that soon after the outbreak occurred upon that man's premises, another occurred on premises, within some hundred yards or so of the first man's, that were in a most disgraceful state. The pigs had not gone from the one premises to the other, neither could the superintendent connect them, but still the state of the premises in which the second outbreak took place was so disgraceful that if a disease of an infectious nature was brought near to it there is no doubt that the bacilli would find a fruitful means of extending the disease.

4428. That is why I want to know what suggestions, if any, you can make to the Committee for dealing more effectually with such a condition of affairs : would you for example favour all persons who keep pigs being obliged to take out a licence, one of the conditions of which would be that their pig-sties should be in a proper place and be kept in a proper condition ?—I think the sanitary authorities are quite sufficient for that. I think the sanitary authorities in the counties under the direction of the medical officer of health are now looking much closer into these matters than they used to do, and they have quite sufficient power to keep premises clean.

4429. From your own experience you have just described to us a case where evidently there was very great neglect ?—Yes, that was two years ago, and it has put them now alive to the importance of carrying out the sanitary arrangements in a more healthy and proper manner.

4430. You are aware that a sanitary authority under the existing law can only intervene where injury is likely to arise to the health of human beings ; it could not intervene on the ground that it was bad for the pig ?—No, truly.

4431. Or likely to create swine fever ?—Just so.

4432. Would you be in favour of the law being so altered that sanitary authorities should be able to enforce sanitary regulations where injury was likely to arise, not only to the health of man, but also to that of beast ?—Certainly, because if the sanitary arrangements are in such a state that they are injurious to the lower animal they would certainly be injurious to the other animal looking after them.

4433. The two things would, in fact, work together ?—Yes, most decidedly.

4434. But you are aware that the existing sanitary law is not sufficient to meet the case of injury to the health of animals ?—Really I cannot bear you out in that matter, because I feel that it is sufficient.

4435. You are aware that the Public Health Act is an Act entirely directed in these matters to the prevention of the creation or perpetuation of nuisances injurious to human health ?—Yes.

4436. Therefore, you will admit that the law would require to be altered if a sanitary officer is to be able to intervene to prevent a filthy condition of affairs which would, in his opinion, perpetuate swine fever ?—I see ; certainly it would be very desirable ; there is no question about that.

4437. Do you consider that it might be desirable to give some larger powers to a county officer to enforce these regulations where a local officer or authority has not done its duty ?—Yes.

4438. You are aware that the Local Government Act of 1888 makes the appointment of county officers of health permissive ?—Yes.

4439. Would you be in favour of so amending the law as to assimilate the English law to the Scotch law, and to make the appointment of such an officer compulsory ?—Certainly I would.

4440. (*Mr. Stephenson.*) How many boroughs are there adjoining to your county ?—Boroughs of what class do you mean ; small market towns ?

4441. Boroughs with independent power I mean, who can make a law for themselves independently of the county ?—Really I cannot tell you off-hand. There is only one inside the county.

4442. Do the town of Hereford and the county of Hereford work in unison ?—Yes.

4443. Perfectly ?—Perfectly.

4444. You attach great importance to uniformity ?—Most decidedly.

4445. If there was uniform action all over the United Kingdom, by that I mean slaughter of diseased and in-contact animals and payment of compensation, with restriction on movement and disinfection, would we get rid of swine fever without any more trouble ?—I have not the slightest doubt about it.

4446. Do you think it is possible to get united action all over the kingdom ?—The representatives of the different boroughs are becoming more alive to the importance of maintaining the health of animals for the benefit of the population.

4447. Is it possible, do you think ?—Without an Act of Parliament I do not think you would be able to do it.

4448. If the treatment of this disease was put into the hands of the central authority, and they carried out similar principles to what have been adopted in stamping out pleuro-pneumonia, do you see any reason why we should not get rid of swine fever in a very short time ?—No, I do not. I believe we should.

4449. Do you see any very great trouble ahead of the central authority in their getting rid of the disease ?—No, I do not.

4450. Not anything but what can be got over ?—No.

4451. How many veterinary inspectors have you in Herefordshire ?—Two ; one for the city and one for the county.

4452. Have you a chief veterinary inspector to supervise all the work ?—No, they act independently for the different districts.

4453. Do you attach much importance to restricting the movement of swine when swine fever is present in a district ?—Yes, certainly.

4454. You think that is very important ?—I think so. We do not allow it.

4455. You have already told the Committee that you have never succeeded in tracing the origin of your outbreaks of disease ?—No, but the strong belief is that it has come from the small markets adjoining. You see my county is very peculiarly situated. There are small market towns just within the area and others just over the boundary, and it is a very difficult matter to guard against pig dealers bringing into the county animals with the disease latent in the system from another county.

4456. Now, when you have an outbreak of swine fever, the place is compulsorily closed for 28 days ?—Yes.

4457. You are not bound to do so, but you may set free then. Have you always declared the place free at the end of 28 days, or do you use your power to keep it closed until such time as you are satisfied that it is thoroughly cleansed and fit for use again ?—We insist upon its being thoroughly cleansed within the 28 days and disinfected in a most careful manner, and we have never had occasion to extend the period of 28 days, neither have we had any extension of the disease from any one of the centres.

4458. That is very satisfactory indeed to you. Now about the valuation of pigs ; you know that at present only 4*l.* can be given for a contact healthy pig ?—Yes, that is so.

4459. Do you think that is sufficient ?—It is not, for instance, in the case of a sow in farrow.

4460. What would you suggest as the limit of value

for in-contact healthy pigs ?—I do not think we ought to go to an extravagant price for pedigree pigs.

4461. What would you think full value ?—I do not; think we ought to go beyond 5*l*., but I think we should go to that.

4462. You would not go to more than 5*l*. ?—No, but I think we should go to 5*l*.

4463. Would you recognise any difference between diseased pigs and in-contact healthy pigs so far as valuation is concerned ?—Yes, we give one-half for the diseased pigs and the full market value for the others.

4464. That 5*l*. you would have to hold good as the limit both for diseased and in-contact healthy pigs ?—Yes.

4465. You would give half value for diseased pigs ?—Yes.

4466. And full value for in-contact pigs ?—Yes.

4467. Now I may take it as a fact that in your county you have regularly stamped out your outbreaks of swine fever ?—Yes, certainly.

4468. Only to have it re-introduced from some place where that is not done ?—Just so.

4469. You think that if swine fever was transferred to the central authority it might be stamped out permanently ?—I have not the slightest doubt about it. My county I consider is managed by a central authority with myself as chairman. We work very loyally together and we have never had the disease extended.

4470. (*Mr. Wardlaw Ramsay.*) Are you a breeder of pigs yourself ?—Not now.

4471. May I ask where you reside ?—I reside nearly a mile and a quarter out of Hereford now. I have given up farming operations.

4472. You used to be at Ross, did you not ?—Near Ross.

4473. Have you ever had swine fever in your own herd when you bred ?—Never.

4474. Has there been much swine fever in the county of Hereford within the last few years ?—No, I think about 20 cases.

4475. I think you said, in answer to a question, that you had never been able to trace a case of swine fever ?—No, not to know where it came from.

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4476. Do you know what part of the country the imported swine principally come from. I presume there is an importation of swine into the county ?—Not much. The county is more a breeding county.

4477. They are chiefly bred in the county ?—Yes. It is not a dairy county, and, therefore, there are not many pigs brought into the county.

4478. I take it there are not many dealers in pigs ?—There are a good many dealers who buy in the county to take out, but at the same time they do bring some in.

4479. Is there a large pig market at Hereford ?—Yes.

4480. You used an expression which I have been trying to find for myself—a very good one. You talked about the boundaries of your county being very much serrated; that is an excellent expression. You think that in forming an infected area the configuration of a county boundary should be taken into special consideration ?—We take it into consideration, because it would be a most serious matter to a man having part of his farm in one county and part of it in another.

4481. I quite understand that you consider it desirable ?—Yes.

4482. Do you know a case in your county in which a farm is half in one county and half in another ?—Many of them, and it is to meet those cases that we do this.

4483. (*Chairman.*) There is one portion of your county, is there not, entirely detached—a small portion ?—That is now altered; it has been done within a month or two. There were two parishes, one parish which is called Fwthog; that is on the mountain, and it is now attached to Monmouthshire.

4484. For cattle plague purposes only ?—The boundary is altered for all purposes, and it is given over to Monmouthshire.

4485. Altogether, for every purpose ?—Yes, for all purposes.

4486. How was that done ?—Under the Boundary Commission. Again, Edvin Loach, adjoining Worcestershire, has been changed in the same way, and I think for all purposes.

[The Witness withdrew.

[Adjourned for a short time.]

The Rev. Leonard Charles Wood, called; and Examined.

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4487. (*Chairman.*) I think you are chairman of the Executive Committee of the Lancashire County Council which deals with the contagious diseases of animals ?—Yes; I have been chairman since the formation of the County Council.

4488. Will you kindly tell us what regulations are in existence in your county on the subject-matter of the present inquiry, which I think you know is, what are the best means of dealing with swine fever ?—We have simply got the Act upon which we act, and the counsel of the Board of Agriculture, with whom we are in constant communication. The Act is in force throughout the county.

4489. Have you got any prohibitions on movement from neighbouring counties ?—We have had frequently when cases have arisen; but then, of course, we have the power of removing the prohibitions when we think there is no necessity for them.

4490. What is the condition now; are there any prohibitions out now ?—No, I do not think there are at the present moment.

4491. What policy have you pursued with regard to compensation and slaughter ?—One of the things on which I think we have felt most our inability to deal with the matter is that question of compensation. The rule upon which we have gone has been this, that where we slaughter the Act distinctly tells us that we shall compensate. Now, very many cases have arisen in which, if we had had a discretionary power, we should not have compensated simply because of the reckless trading of the parties who became owners of the pigs. As the Act stands we have always felt that we had no power to withhold compensation where we slaughtered, and therefore in many cases it has been against our own will to slaughter, but we had no discretionary power. I think that is one of the weak points in the powers of the local authorities, if I may venture to say so; we are merely a compensating body, in truth.

4492. But you do at this moment slaughter and compensate ?—Always, the county authorities have always done that. I am sorry to say there is not simultaneous action between the county authorities and the borough authorities. In many instances the borough authorities have refused to slaughter simply because they had to pay compensation. We have never hesitated upon that point. Of course half the loss has to be borne by the owner of the animal slaughtered; the other half is paid out of the county rate.

4493. There are a considerable number of independent jurisdictions, borough jurisdictions, within your county, are there not ?—Yes, a great many, of course. It is a county in which there are a great number

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of county boroughs as well as non-county boroughs, and, naturally, they have their own local authority, over which we have no control. We simply deal with the matter in the administrative county.

4494. Can you tell us what the area and population of the administrative county of Lancaster are?—I do not know that I could; I am scarcely prepared, perhaps, to give you straight offhand what it may be.

4495. Of course, when one speaks of Lancashire, one figures to one's self the whole county?—The administrative county consists of all Lancashire except what is occupied by the boroughs.

4496. I wanted to bring out if possible the difference between the two, because of course Lancashire, as an administrative county, is very much smaller than Lancashire as a geographical county?—Certainly. There are the cities of Liverpool and Manchester, which are counties in themselves, and there are several other towns also which are counties in themselves.

4497. I suppose there is a large portion of the county where there are roads which run through these independent jurisdictions, and then into the county, and then again into another independent jurisdiction?—Certainly, there are these roads which run through the boroughs, and which are not then within our jurisdiction.

4498. There are, if I am not mistaken, within the limits of the geographical county of Lancaster 32 boroughs with cattle-plague jurisdiction?—Yes.

4499. That is, I suppose, a larger number than in any county in England?—Yes, I daresay so; naturally it would be.

4500. You have also, I suppose, a great number of pigs imported into Ireland from Lancashire, have you not?—Yes, there are a great number. We have two ports into Lancashire into which there are great numbers imported; in fact, three, I may venture to say; Liverpool specially; Fleetwood is another, into which a large number of pigs is imported, and Barrow is another.

4501. Now, I understand that you have found great difficulty arising from this multiplicity of jurisdictions in your county?—Yes, we have done.

4502. And from the varying practice of neighbouring counties?—Yes, quite so.

4503. Have you had any actual outbreaks recently?—Yes, several. If you will take the year 1892, for instance, I have a return of what the outbreaks have been for that year. The outbreaks in the administrative county in 1892 were 203, and the number of animals attacked were 867. Those outbreaks invariably came from about four districts; from Ireland; principally from Bedford; one or two from London; and some from Fakenham in Norfolk. That is easily accounted for by the simple fact that there are dealers who advertise in all our local papers, and who are in constant communication with the local dealers whom they supply; and those are the parties that we never can arrive at.

4504. Now, I should like to ask you some questions about each of these outbreaks that you have mentioned. I will take Ireland last, and I will deal with the English districts first. Have you got prohibitions on movement from Bedford, for example?—No, we have none in force at present.

4505. Have you ever put Bedford under an interdict?—Yes, I fancy we have in the days gone by, but I think we have not recently. Our difficulty lies here, that although the pigs come from Bedford, in reality from a dealer there, they are supplied to a local dealer in the county; then he distributes them first of all perhaps through a borough market; in the next place he will have a consignment of pigs to some quiet siding, where he will bring carts and that sort of thing, put them into the carts and hawk them about the country. Naturally, farmers and others are tempted by the lowness of the prices. I wonder how it is possible that the pigs can be sold, if they are really sound animals, at such prices at the present time. The price of pigs I may put before you at the present moment, to show what an inducement there is to the farmers to deal with them. The price of pigs eight or nine weeks old in Lancashire is not less at the present moment, nor is it during the spring, than from 30*s.* to 35*s.*, but dealers will supply them at twelve, thirteen, and fourteen weeks old at so many shillings, 12*s.* or 13*s.* How the people who breed them in the other counties can afford to send them into Lancashire at such a price we are always at a loss to understand.

4506. Have you put the administrative county of London under a prohibition?—No. We have not had many cases from London, only one or two, or something of that kind.

4507. How about Norfolk?—Norfolk we have not; there have not been very many recently. The largest importations of disease into the county, certainly during the past year, 1892, have come direct from Bedford. There is one thing that we have got great occasion to complain of; it is simply this: of course we ask our inspectors, you understand, with reference to these cases, to communicate with the police at Bedford, but we never get any assistance from them. They merely say that the advertising dealers have no disease on their premises. The answer we always get from the police is, that there is no disease upon their premises, and that their premises are kept in a healthy condition. But when we make further inquiries, not through the police, into the manner in which they conduct their trade, we find it is thus: that they buy pigs in the country, not in Bedfordshire only, but in other counties, and send them away; and the pigs never arrive on their premises at all. They are not themselves the breeders, and they pass them on to the Lancashire dealer, and then he distributes them, and with them distributes the disease.

4508. I understand that you are speaking of the town of Bedford?—I am speaking now of the town of Bedford, and of the dealers in the town who are constant advertisers in the local papers.

4509. Are you aware that the town and county of Bedford are two separate jurisdictions?—Yes, I know they are.

4510. I was anxious to bring out clearly that you were speaking of the town, and not of the county, at this moment?—That is so.

4511. I gather that on the whole your opinion is that Bedford is a serious centre of infection?—Most serious.

4512. Has it ever come within your knowledge that these Bedford dealers have moved pigs into neighbouring counties, and then sent them on to you?—That I do not know, but that they are driving a very large trade with our county is perfectly clear, both with dealers and with individual farmers, who are tempted by the lowness of the price, and therefore I suppose that is the reason why they buy the pigs.

4513. I think you stated that you had also had cases of disease with imported Irish pigs?—Yes.

4514. Will you tell us a little about the character and extent of the trade with Ireland through these imports?—I can give you a return of the outbreaks from Ireland during 1892; I have it here (*handing in return*). It is an official return, given to me by the deputy clerk of the county council, and I can leave it with you if it will be of any instruction to you. You will find that the diseased pigs come from dealers, who seem to have sent the disease into our county.

4515. Where are their places of business?—Liverpool, principally. The pigs are landed at Liverpool and at Fleetwood; then they are distributed throughout the county.

4516. Are the dealers you have mentioned Liverpool dealers?—Yes. Then there is a firm that I may mention to you. There are three brothers in the trade; one brother is employed entirely in Ireland,

and his two brothers are situated at Preston. Of course he supplies the pigs, and they distribute the animals throughout the country. They drive a very large trade indeed, I believe as many as 200 pigs a week.

4517. Now I should like to try to follow the Irish pig; there are three brothers you mentioned?—Yes, and there are several others mentioned on this return which I have handed in.

4518. You have mentioned three especially?—Yes. I have on this return other names.

4519–20. (*Sir Jacob Wilson.*) You are now merely referring to Ireland?—I am referring to Ireland alone.

4521. (*Chairman.*) I wanted to follow, if I could, the Irish pig from his home into Lancashire. What regulations are there, so far as you can tell us, to protect Lancashire at the Irish port?—I do not think there is any protection at all. I am not aware that there is any protection on the other side of the water.

4522. You are not aware of there being any inspection in Ireland, do you mean?—Certainly, they could not import the disease into Lancashire if it does not exist in Ireland.

4523. Inspection, not infection, I said?—I am not aware that there is inspection in Ireland at all.

4524. In any case, if it does exist, your opinion is that it is not properly carried out?—Certainly, it is not carried out.

4525. The Irish pig is shipped mainly from where?—A great number of them are shipped at Belfast and landed at Fleetwood, others are shipped at Dublin and brought over to Liverpool.

4526. What happens when the pig arrives at those ports?—In the first place I will take Fleetwood as an instance; there the pigs are shown in the market to the neighbouring farmers. If they choose to go down when the boat arrives they can go and buy the animals when they like. Those not sold are then put into waggons and carted about the country; they go to Preston, for instance.

4527. Is there any inspection at Fleetwood by any authority?—No, I do not think there is any inspection there. There was a Government inspector there five or six years ago, but he was removed, and I do not think there has been any other inspector actually appointed for their inspection there.

4528. In what jurisdiction are these ports; if any inspection was carried out, by whose officer, the officer of what authority, would it be carried out?—When an outbreak of disease took place, of course, it would be reported, through the police, to us as being the local authority.

4529. Is there no port authority?—No, I do not think there is any port authority.

4530. Therefore the earliest control over them of any kind is that of the local authority of the place of landing?—Yes.

4531. At Liverpool that would be the authority of the city?—Yes.

4532. And at Fleetwood, what is the authority there?—I do not think there is any authority at all.

4533. I suppose it is in the county?—Yes, it is certainly in the county, but there is no authority for inspection at Fleetwood that I am aware of. I have been myself at Fleetwood; in fact, I represent Fleetwood on the county council, and therefore I ought to know something about it. There is no inspection takes place there at all, and we know nothing of it until the disease has actually broken out, and then we have to deal with it as the local authority under the Board of Agriculture.

4534. Do you, then, favour any more severe control of the trade in regard to inspection?—Yes, most positively. I should say that it is highly desirable that it should be so, but the parties that we want really to control, and that we want authority over, to my mind, are, after all, the dealers. They get off scot free. However much mischief they do in the country, we have no power to punish them in any way. The owner of the pig at the time it is found to be diseased loses half the value, and the ratepayers pay the other half; but the dealer, who has done all the mischief, and who has spread the disease in various parts of the county, as we have known, repeatedly, goes perfectly free, and we cannot touch him in any possible way. I might call your attention to a recommendation which was made, I think, by our Committee at the end of 1891, which I will read to you, upon the subject of licensing dealers, which we thought would be the only way of giving us a handle upon them. I will read it to you from the report of our proceedings. This was sent, I think, to the Board of Agriculture. The words are these: "Your Committee regret to have to report "that, in spite of the regulations which came into "force on the 21st August 1890, prohibiting the "movement of swine into the district of the adminis-"trative county without a licence granted by one of "the inspectors of the local authority, there has been "an increase in the number of outbreaks of swine "fever reported during the twelve months ended the "30th of September last. The greater portion of "these outbreaks were traceable to pigs purchased in "the markets of some of the county boroughs or from "the itinerant dealers, and the Committee are of "opinion that very little can be done to check the "spread of this disease, unless power is given to a "local authority to control the importation of pigs "from Ireland, and also to compel the dealers to take "out licences." That was a recommendation from our Committee to the Board of Agriculture, as reported in the proceedings of the county council.

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4535. Now, what is the extent of your legal powers as against Ireland; can you treat Ireland in the same way that you can treat a neighbouring county?—No, we have no power to do anything of the kind. There is no power at all that we are aware of, or at least that I am aware of, and I think I am correct in saying it.

4536. You cannot restrict the movement of pigs from Ireland in any way?—No.

4537. They have a right, which no regulation of yours can stop, to land at Liverpool or at any other Lancashire port?—Quite so. We have no authority whatever on that.

4538. Have you any recommendations to make to the Committee upon that branch of the subject?—I would beg to refer you to the resolution which we forwarded to the Board of Agriculture last year. On the 3rd of November this resolution was passed by the Committee: "The Committee begs to recommend "that it is very desirable that either the county "council should have further powers conferred on it "for the suppression of swine fever, or that the Board "of Agriculture should take upon itself the whole "control over and expense incurred in suppressing "the disease in the same manner as it now regulates "all matters relating to pleuro-pneumonia in cattle, as "at present the divided control of the board and the "county council is inefficient for the suppression of "swine fever." Our great difficulty lies in the want of unanimity of action upon the part of the county authorities and the borough authorities. The borough authorities will protect their ratepayers by not slaughtering as we have done upon all occasions. It appears to me that they are the markets, in truth, to which these fellows take their animals, and so spread them all over the land. I may add that there is very great recklessness on the part of the buyers. I could give an instance of that, and it is very hard indeed, it appears to me, that we should be compelled to give compensation in such a case. A man purchased a pig, we will say, at Blackburn, in Blackburn market. He takes it home and finds that it is diseased. The case is reported to us; we slaughter the animal—I am not speaking of an individual animal, perhaps it would be five, or six, or ten, if you will—and we give

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the man compensation. Of course the premises are disinfected, and at the end of twenty-eight days he applies to us to declare his premises free from disease. The very same man has been found in several instances in less than a fortnight going to the very same market and the very same dealer, and he brings that dealer's pigs back again, and the same man comes to us for compensation, and then we are advised that we have no power to withhold it from him. I think it is certainly a very defective condition of the law. That is reckless, rash trading on the part of the individual, and he ought to suffer for it.

4539. In regard to the Irish branch of the subject, I may, perhaps, point out to you that handing over the management and the English control to the Board of Agriculture in London would not necessarily completely meet your recommendations, because the Irish Privy Council has a concurrent jurisdiction. You assume, I suppose, that the two authorities would, as I have no doubt they would, work cordially together? —We should hope so, certainly.

4540. You are aware, no doubt, that the Irish Privy Council has jurisdiction under the pleuro-pneumonia Acts in Ireland, while the Board of Agriculture has jurisdiction in England?—Yes.

4541. But you have not found, from your experience, which, naturally, as the Chairman of the Executive Committee, is very great, that any trouble has arisen from the fact of those two jurisdictions?—No; we have not.

4542. Have you any suggestion to make to the Committee in regard to the amount of compensation that is paid?—The amount of compensation, as paid at present, of course, is half the value of the animal valued.

4543. Are you satisfied with that limit as a rule? —I think it is quite sufficient. I did not tell your Lordship in mentioning the compensations which are existing at the present moment, that the farming interest are now appealing very strongly to the Government for full compensation.

4544. That is the reason why I asked you the question. —In all directions of our own county, where the Farmers' Associations at present rather swarm, it is one of their strong points that they are urging upon the Government now to allow full compensation, the same as in cases of pleuro.

4545. (*Sir Jacob Wilson.*) For both diseased pigs and pigs in contact?—Yes.

4546. Both?—Yes, for everything that is slaughtered. If they slaughter the pig they claim the right of its being paid for. They say it is slaughtered for the benefit of the public, and the public ought to pay. That is their argument. I am very much afraid if that were the case there would be still more reckless trading than there is at the present moment. That is my own view of the matter.

4547. (*Chairman.*) I wish to ask you a few questions on the branch of the subject connected with sanitary measures. Do you consider that any improvement could be made in the law so as to compel pigsties, and places where pigs are kept generally, to be kept in a more clean and sanitary condition?—I think that the law, if properly carried out, is quite sufficient, but I am sorry to say that I think the officers who have got to carry out the law are not perhaps as diligent in their duties as they ought to be; of course, that rests with the Medical Officer of Health for the district, who has got a right to inspect dairies and farms, and to inspect piggeries as well, but I am afraid that is a part of his duty which he finds, in the present day, is not very convenient, and there is not very much in that way done.

4548. Your county, if I am not mistaken, is one of those counties which has appointed a county Medical Officer of Health?—Yes, certainly.

4549. One officer?—Yes, he is a county officer, irrespective of the medical officer of health appointed by the local boards and so forth.

4550. It is, perhaps, too soon to ask you the question, but have you as yet seen any advantage arising from his activity in these matters?—The fact is that he acts, as a rule, upon what is brought before him in the reports of the various local authorities—by the local medical men. They give him their reports, and he has nothing else to go upon. He does not visit himself, and unless his attention is actually called to the insanitary condition of things, he knows nothing about it. His other duties, I daresay, are very arduous, such as those connected with the pollution of rivers, and so forth, and he expects that the officers in the various localities will give him all necessary information upon that point.

4551. Are you connected with cases where this county jurisdiction has, perhaps, encouraged the local officers to be less remiss in their duties than they otherwise would?—I know that personally he does so. the opinion of your veterinary surgeons, whether that is sufficient to produce swine fever; will it produce the disease in itself? In various instances I may tell you that we have found that these animals develope disease within two days of their arrival; therefore, it is perfectly clear that they must have been in a condition of disease when they were put into the truck.

4563. You say that it is not infrequent that as many as 40 or 50 pigs come in one lot?—Yes.

4564. From which you would fairly assume that they are collected from more than one farm?—No doubt.

4565. It appears that Lancashire has already petitioned in favour of pig dealers being licensed?— Yes, there is a very strong feeling on the part of our Committee in favour of that.

4566. Would you suggest that a licence should be required for any other person connected with the pig trade?—I think you could not give it to an ordinary farmer, who has very likely bred his pigs, and takes them into the market. That is a legitimate part of his trade and his calling. But with reference to the dealers, we want to get a hold on those men. I know, for instance, it is a question whether they should not be called upon to warrant these very animals for a certain period after the sale of them, supposing you gave them a licence.

4567. You have a large market, I believe, at Preston?—Yes.

4568. Can you give the Committee any idea of the number of pigs sold weekly in that market?—They vary very much. There are more pigs bought in the spring, at that season of the year, as a matter of course. We are a dairy county, and the farmers themselves want pigs to take their butter-milk or their whey, and, therefore, there is a much larger trade at the beginning of the year than there is at any other period.

4569. I take it that in consequence of the agricultural economy of Lancashire being chiefly connected with dairy management, the farmers require more pigs than they usually breed in the county?—Certainly.

4570. Consequently the farmers and dairymen of Lancashire must go somewhere outside their own county to be supplied?—Yes, I fancy that is all correct.

4571. In connection with the market at Preston are there any special lairs which are occupied by pigs before or after the market day?—No, except that there are resident dealers, the men whom I mentioned to you just now, the three brothers, one in Ireland and two at Preston. They have no doubt a lair.

4572. Then I gather that there are pig lairs in the borough of Preston?—Yes.

4573. For the accomodation of men carrying on the business of dealing in pigs, and in conjunction with the market at Preston?—Yes.

4574. Are those under any special control?—They are under the control of the local authority, that is, of the officers of the borough of Preston. We have no authority over them.

4575. Are they under the control of the market authority, or of the local authority?—I should suppose they are under the control of the market authority, who derive their authority, as a matter of course, from the town authorities.

4576. I understand that in the event of any sales or purchases taking place within those lairs, toll can be demanded?—That I could not answer; but inasmuch as it is when the pigs are exhibited for sale that there is a toll, I should question whether, upon their private premises, there would be a toll.

4577. Would it not be very highly probable that a great amount of business is carried on in those private lairs unknown to the market authorities?—Yes; I should certainly say so.

4578. Therefore they might be a fruitful source of disease, and might account for many of the mysterious He is a friend of my own, and I know him very well indeed. He is quite alive to all the necessity of it, and I do not doubt that wherever he has got the opportunity he does press it upon the various officers.

4552. We are, of course, here holding a general inquiry, not merely in regard to Lancashire, therefore I think I would ask you this question, whether you consider that the experience that you have had in Lancashire of the appointment of a county medical officer of health would lead you to favour the appointment of such an officer in every county in England?—I should be very ready to answer that by at once saying that I think it was the best appointment that ever has been made by the County Council, and the most necessary.

4553. (*Sir Jacob Wilson.*) Out of the four sources from which you have derived disease in Lancashire, can you differentiate as to which you attribute the greatest amount of importation of disease?—Yes, very easily, particularly if you will refer to 1892. There can be no doubt that more disease has been imported into Lancashire from Bedford than from the other three put together, either from Ireland or the other two.

4554. Is it your practice in Lancashire to adopt every means to trace the origin of the disease?—Certainly, in every possible way that we can do.

4555. Is that done through the police?—Principally.

4556. Of course with the assistance of your veterinary officers?—Yes, certainly.

4557. Is it to the borough or to the county of Bedford that you attribute most of your disease?—The dealers are resident in the town of Bedford, and if you answer their advertisements, of course they communicate with you from there, but the animals themselves are bought all over the county, and they never go to Bedford at all. I have ascertained that through private persons who have been purchasing from them. A man told me only a few days ago—one of my largest farmers—that he had been in the habit of buying from some of these dealers, but he had given it up now because they had given him the disease. He gave an order, perhaps, for 20 or 30 pigs; they could not execute the order at once, but they told him that perhaps in the course of a fortnight they would send them, which showed plainly enough that they had to go into other places to find them.

4558. As a matter of fact, from that you believe that the men who advertise to supply pigs from Bedford have not pigs actually in their possession?—Quite so, that is the reason why we can get no information from the police of Bedford as to the insanitary condition of their premises. They have never seen the pigs.

4559. Are you aware whether any of those advertisers live outside the borough of Bedford?—No; I do not know where they live, I cannot tell you, they are not known to me. It is very possible that they are in the county.

4560. Then what I gather is that their practice is to send these pigs in crates, or in trucks, to some small station?—Yes.

4561. Where supervision, perhaps, is not very rigorously carried out?—Quite so. That is a very common practice indeed, particularly in the transactions with local dealers.

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4562. Has that been traced by your authorities?—Constantly. There is a question which has arisen, and which, perhaps, I may as well mention to you, as it has been brought before us on very many occasions, and that is their mode of transit. They put 40 or 50 pigs, crowded together, into a truck; they bring them by luggage train, which, of course, is a very slow mover, and those pigs may remain there for two or three days. When they come out the pigs are in a state of fever, and I suppose the stench is something too dreadful for those who have got the first opening of them. They cover them with a tarpaulin. It has been a great question with us, but that, of course, you can arrive at through the experience, or rather through outbreaks which take place throughout the county?—No doubt.

4579. I gather that your local authority petitioned the Board of Agriculture to give them special powers, but I think on a further question it appeared that that was in the event only of the central authority not assuming those powers?—Well, I do not know quite what you mean. I do not know that we asked for special powers. We sent a resolution to the Board of Agriculture, saying that we recommended that the dealers should be compelled to take out licenses, so that we should be able to deal with them, and to withhold a license supposing we found that they were dangerous in the way of distributing disease.

4580. That is, you, the local authority, should have that power?—Yes, certainly.

4581. You afterwards said, in answer to a subsequent question, as I gather, that you petitioned that the central authority should take the power?—No; we asked that they should either enlarge our powers, because we felt that our powers were too limited, or that they should take the thing off our hands, because we felt our weakness.

4582. That is just what my question implied?—You will find all that in the resolution which was passed, and which I read just now.

4583. After that explanation I gather that you would prefer that the central authority should take the responsibility of direct action?—I do not think I should go so far as to say that I should prefer that. My own opinion is that the local authority, armed with proper powers, would be a more useful instrument for preventing disease than even the central authority, from the simple fact, if I may give you the reason of it, that we know the parties. We know everybody who comes in contact with them, which the officers of the central authority could not possibly do by means of an ordinary visit.

4584. I observed that you used the words "prevention of disease;" now in the case of an outbreak of disease, which would be the proper authority to take charge?—I think it is perfectly immaterial which takes the charge then, because if the law which either authority would have to carry out were properly carried out, I cannot see that it makes a great deal of difference.

4585. May I ask you who do you prefer should pay the compensation under those circumstances?—That is settled, I should suppose, by the Act.

4586. No.—Not the question of compensation?

4587. That is just what you are here for. I ask you whether you are satisfied, in the event of an outbreak of disease, that the local authority should continue to act and pay, or whether you would prefer that the central authority should act and pay?—If the central authority had the management they would pay as a matter of course, but if the local authority had it, well, the local authority would pay as they do now, that is, half the compensation.

4588. Then do I gather from this that you are satisfied with the conditions which at present exist?—

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Yes; supposing we had ample power for carrying them out, and protecting the county from disease.

4589. And am I to assume that you are speaking on behalf of the ratepayers of Lancashire?—On that I will not say anything; I am giving you my own opinion, rather than perhaps what they think.

4590. I am, perhaps, justified in asking that question?—I do not speak on behalf of the ratepayers; I express my opinion.

4591. Do you agree that in the case of an outbreak there should be compulsory slaughter?—Certainly.

4592. And that compulsory slaughter should extend, not only to animals diseased, but to animals in contact?—Yes.

4593. You agree further, I understand, that there should be a liberal compensation?—Yes.

4594. For both diseased and in-contact pigs?—As exists at the present moment under the Act under which we are working.

4595. Then from what source should that compensation be paid—I am looking to the future; we will leave the post—what do you recommend?—You mean supposing that the present regulations were continued, are we satisfied with them.

4596. I suppose nothing; what do you recommend for the future administration in case of an outbreak of disease—who shall take the management, and who shall pay?—My own opinion about it, as I told you just now is, that the local authority, armed with proper powers, would be the best authority you could have in the various counties.

4597. Now, let me put it in another fashion. In the event of the central authority, the Board of Agriculture I will call it, taking the control of this, agreeing to pay compensation, putting certain restrictions on movement, and, where they were satisfied, appointing the present officers in Lancashire as their officers; what would you then recommend—that they should take the control, or that they should leave it to the local authorities?—That is merely, as far as I gather from your question, a deputed authority?

4598. No.—I do not think myself that there is any hardship at all in each county protecting itself, or paying its own compensation, but I think any enactments ought to be so compulsory that all the local authorities in a county ought to be obliged to act uniformly—that it should not be a matter of discretion with them, but that they should be obliged to do so.

4599. You quoted some cases where more than one outbreak took place upon the same farm?—Yes, we have had several before us.

4600. Do you not think that that was fraudulently brought about?—No, I believe it was due to reckless trading, to very great indiscretion on the part of the buyer of the pigs in going to the very same market that he knew disease had sprung from, and actually buying pigs from the very dealer who had let him in for it before.

4601. Do you believe that there are many instances of fraudulent concealment in the county?—We have not found that there has been very much. There have been certain ones, and there always will be, as a matter of course, but as a rule I think myself that they have been perfectly willing to give us information, because they were looking for the compensation. They did not very likely in the first instance; for a single animal it is very likely they did not give the police information of it, but since they have found it was a contagious disease, and that others were affected, they have always been ready to give the information.

4602. Is it your opinion that swine fever must necessarily always exist in this country, or is it like foot-and-mouth-disease and pleuro-pneumonia, capable of being exterminated?—I certainly think it is quite capable of being exterminated.

4603. But in order to bring that about it would require some uniform system of administration?—Certainly. The task of punishing offenders is exceedingly difficult. May I give you an instance that occurred from the very place we have been speaking about. A pig dealer in my own district had an importation of 40 pigs, or something of the kind from Bedford. He advertised them for sale by auction. The farmers saw them and they went to his house to look at them; they found that they were flourishing, apparently healthy-looking pigs. He advertised them to be sold at an inn in a neighbouring town. He brought them there; the pigs refused to eat when they were brought there in the morning, and rather caused suspicion on the part of some of the buyers; the consequence was that when he sold them off he had not a very good market, and only disposed of some of them. In three days after that he took the rest of those, every animal, into a borough; they had a public slaughter-house in the borough and every one of the animals that were sold at both places were taken with the disease and slaughtered. I went into that borough, and went to the authorities there; I said, "This is a "case in which we, the county authority, cannot "interfere. You can deal with this man, who "evidently knew that these pigs were not well, for I "believe one or two of them had died in his own house, "or in a neighbour's." They refused to prosecute the man, upon this ground, that the town clerk advised them that the onus of proof rested with them; that it was not sufficient for them to prove that the pigs were diseased when they were sold, but that the onus of proof rested with them to prove that the man knew that they were diseased before the magistrates would punish. So they gave it up and did not punish him at all, but let him go free.

4604. (*Chairman.*) I do not quite follow your answer; did they insist upon a prosecution?—No, they would not do it, and they did not do it, and the man got scot free who did all that. While there is action of that description what can you do.

4605. (*Sir Jacob Wilson.*) You attribute, therefore, much of the continued existence of swine fever in Lancashire to the want of uniformity between the boroughs and the rest of the county?—I do.

4606. Quite as much as to the want of uniformity between county and county?—Certainly.

4607. Now, I gather from you that the only means of exterminating disease is to establish some authority by which you will get uniformity of action?—Quite so.

4608. Do you believe it will ever be possible to get uniformity of action if left absolutely to the local authorities?—To my mind it depends altogether upon the force of the enactments under which the local authorities act. I know it is very difficult.

4609. Under any Act of Parliament do you really expect that you can get the local authority of Bedford, for instance, to agree with the action of the local authority of Lancashire?—I do not see why they should not be made to do it.

4610. You have great faith in accomplishing this?—I have faith in power, and I have faith in the governing body forcing it upon them to do it, if they do not do it. I think there should be penalties if they do not carry it out. The law is clearly defined, and we can do it without a doubt.

4611. Then, is the outcome of your evidence to show that you think that with certain powers the local authorities of England would be as likely to accomplish the extermination of swine fever as the Board of Agriculture?—Certainly I do; that is just what we asked for, that they should either give us enlarged powers, or take it off our hands, because we feel our weakness.

4612. I want to know which you would prefer?—I am a believer in local government, and I believe in that.

4613. (*Mr. Joseph Smith.*) With reference to these Irish pigs, have you any returns, or can you give us any idea of the proportion of cases that come from Ireland?—You will find it upon that return which I have handed in. All the cases that came

from Ireland are reported there, taken actually from our returns for 1892.

4614. You say more came from Bedfordshire than from Ireland ?—Yes, recently, most assuredly.

4615. What sort of pigs are they that come from Ireland into your county ?—I daresay you know the Irish pigs. They are the long-snouted ones.

4616. Large ones or small ones ?—Good-sized pigs. Flatsided, long-legged pigs ; no special breeding about them, crosses evidently.

4617. Are not most of the pigs which come to Liverpool bought to be killed ?—No, they import pigs both ready for killing and also store pigs.

4618. From Liverpool, then, they get distributed over the county ?—Yes.

4619. And you have no jurisdiction ?—No. Of course, if they come into the administrative county, we have jurisdiction, but we have no jurisdiction, of course, in the boroughs ; and in Lancashire, as your Chairman said, where there are 32 boroughs, you may suppose there are a great many authorities.

4620. That is the difficulty, because you have such a divided jurisdiction that you have no power ? —Yes.

4621. All along you have compensated for the contact pigs, and slaughtered all the contact pigs ?— Yes, the county always have.

4622. And paid the value ?—Half the value.

4623. (*Mr. Wardlaw Ramsay.*) Of diseased animals, too ?—Yes, the owner loses one-half, and we pay the other. All that we slaughter we pay half value for. They are valued by the veterinary inspector, and we pay half the compensation.

4624. (*Mr. Joseph Smith.*) You do slaughter all the contact pigs ; all the healthy pigs that have been in contact ?—Certainly, if we think it necessary.

4625. But you only pay half ?—Yes.

4626. (*Mr. Wardlaw Ramsay.*) For both the diseased and in-contact pigs ?—For both.

4627. Have you had any restrictions on the traffic of pigs in the administrative county of Lancaster owing to swine fever ?—Yes, wherever we have found that there has been disease existing we have always put on the restrictions.

4628. And has that had the effect of reducing the amount of swine fever ?—It is a very difficult question to answer. I should suppose it has, certainly ; the natural thing would be that it had. Of course if we, as a local authority, impose restrictions we have got the power of removing them, and if the Board of Agriculture impose, then, of course, they have got the power of removing them.

4629. You could not say that there was any great difference in the amount of swine fever owing to the restrictions imposed ? — The swine fever in Lancashire diminished in 1892. We paid a larger amount by, I think, four hundred and something pounds in 1893 than we did in 1892.

4630. Was the county under restrictions during the time of the foot-and-mouth outbreak ?—Yes, certainly.

4631. Therefore, that included pigs ?—Yes.

4632. Was there any perceptible diminution in the amount of swine fever at that time ?—No, I do not think there was.

4633. Do you think the increase in railway rates has had any effect upon the amount of traffic in pigs ? —I should think not yet ; not visibly.

4634. You said, I think, that it was a matter of surprise that dealers were able to sell for 12*s.* or 13*s.* pigs which were really worth, did you say, 30*s.* ?—I did, and 35*s.* ; from 30*s.* to 35*s.*

4635. Have you any reason to think that that is because they are known to be diseased ?—We have always had a suspicion that these pigs could not be sold for the money, because they pass through the hands of dealers who have got to get a profit upon them, and then there is also the expense of the carriage of them, and so we can never understand how it is possible for those people to supply the pigs at the prices at which they advertise.

4636. Unless they bought them cheap ?—Unless they were under suspicion.

4637. Then I presume that that is a natural inference relating to the trade of these Bedford dealers ?— Certainly.

4638. May I ask whether your county does not protect itself against Bedford ?—It does do so ; it has done so.

4639. I thought there was no restriction ?—I do not think there is at the present moment.

4640. It has been removed ?—Yes.

4641. Why ?—The season is coming on. In reality in the very cold season, there is not very much importation of pigs into the county, not in the winter, but when spring begins, then it comes. It is the time of the year that they are in demand in our place. It is the time when we want them, and that is the time of year at which you will find we do not want them. I think Mr. Muspratt, our deputy clerk, made a note upon that point.

4642. Is there any reason why you should not have an inspection at the port of debarkation at Fleetwood ? —None whatever, but we have no power, I presume, to put an inspector on. I fancy that that was a direct Government appointment.

4643. Fleetwood is in the county, is it not ; it has a separate jurisdiction ?—It is in the administrative county. It is a comparatively small port, as a matter of course, by the side of Liverpool, but still there is a very great deal of traffic there, both of cattle and of pigs. I have a note here from Mr. Muspratt, who says, "From the return it would appear that the prin- "cipal importation of swine from Ireland is during "the first six months of the year ; and no doubt this "is so, as most of the people who keep pigs seem to "buy them young, and fatten them up for the winter "time." This is perfectly right. It confirms what I have just said, that this is the time when they are really required.

4644. Has your county never taken any steps to secure the Government inspection of Fleetwood ?—I do not think it has ever made any application.

4645. I think you said that you were in favour of licensing piggeries, or was it dealers ?—Dealers.

4646. In what way would a licence operate advantageously ?—Supposing that a dealer were a licensed individual, we could control his manner of conducting his business. If we found that he was a man who introduced disease carelessly, or as Sir Jacob Wilson put it, fraudulently, in any possible manner, or that he used to conceal disease, or evidently was in the habit of selling diseased animals, or that description of thing, we could withdraw his licence.

4647. You could withdraw his licence ?—Yes, he would be under control, which he is not at the present moment.

4648. I understood from you that the best mode of future procedure would be to give increased powers, and to allow the local authorities to control the dealing with swine fever, or the extermination of it ; but you have no objection, I presume, to the Board of Agriculture taking the work over ?—None whatever. We made that recommendation either way, either that they should procure us enlarged powers, or take it out of our hands, simply because we found that we could not deal with it effectually.

4649. (*Sir W. Kaye.*) Are you aware how many pigs are imported into Lancashire from Ireland in any one year ; have you got a return ?—No, we have not a return of that sort.

4650. I suppose if I gave you 243,000 as the number, according to our published returns, in the year 1891—I have not the figures for 1892—you would accept that ?—Yes.

4651. This return that you have handed in is really the case you have against Ireland ?—Yes.

4652. Would you just explain that return ?—Do,

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you mean to say that it is a very small item considering the number of pigs introduced into the country ?

4653. I am not saying anything at all ?—I must call your attention to this fact, that it is only a return from the administrative county, and not from the 32 boroughs.

4654. I know that perfectly. What I want you to do is this, to explain the return. You see there is a column headed, "Date when bought;" but does it show when the disease took place, or anything of that sort ? Yes.

4655. Show me ?—That is the date of the outbreak.

4656. Which, where is it ?—We elicit in evidence the date when bought, the number of swine affected, and the name of the party where the disease occurred, if that is what you are referring to.

4657. What is the date in the second column ?—That is the date of the outbreak of the disease, I should presume.

4658. Where can we see it ?—I presume it is so because the sixth column gives the date when bought, and therefore I should take that to be the date of the outbreak. Take the first item. They were bought on the 12th February, and the disease appeared on the 14th February. The next was bought on the 3rd February, and the outbreak was on the 17th March.

4659. Then the column headed "Date 1892" gives the date when the outbreak was reported ?—Yes, I presume so.

4660. You presume it to be so ?—This is a return made for me by the deputy clerk of the County Council. I asked him to give me the information, because I thought you particularly wanted information with regard to Ireland.

4661. Certainly. You have bracketed a number here, and you say, "All these pigs part of a shipment "of 59 from Ireland" ?—Yes.

4662. Where does that appear; these which you have bracketed are all of different dates ?—That is a note of the deputy clerk.

4663. Is there anything in that return to show when the pigs were landed in Lancashire from Ireland ?—No, I do not think there is.

4664. There is not ?—No.

4665. That is what I want to know ?—I do not see it.

4666. At all events you are of opinion that whatever measures are taken for stamping out this disease in England, similar measures ought to be taken in Ireland ?—Certainly.

4667. There is just one other point on this question about compensation: you say that it is a source of grievance that you have been obliged to pay compensation in cases where the parties have been guilty of recklessness ?—Yes.

4668. In not having served notice in time or otherwise ?—No, not in that instance, but in the manner in which they have gone to work to purchase their pigs. They have gone to a market where they know perfectly well there have been outbreaks. They have bought from the very men who have been spreading the disease, and they have known it has been amongst their neighbours. I call that reckless trading, and one that they ought to suffer for.

4669. Are you aware that the local authority has perfect power to withhold the payment of compensation where they think the party has been guilty of any offence against the Act ?—Yes; if it is an open case of fraud. Our legal adviser says the Act does not say "may." It says "shall."

4670. Just listen to this. I do not know whether this has escaped your notice. It may be useful to you. It is under one of the sub-sections of Section 30 of the Act of 1878: "Notwithstanding anything in this Act, "the Privy Council, or the local authority, as the case "may be, may, if they think fit, withhold either wholly "or partially compensation or other payment in respect "to an animal slaughtered under this Act by their "respective Order, where the owner, or the person "having charge thereof has, in their respective judge-"ment, been guilty in relation to the animal of an "offence against this Act, or where the animal has "been"—so and so ?—Would the fact of a man going a second time to a sale or market be an offence against the Act which would justify us in inflicting the penalty ?

4671. That would be a question to be seen to; whether you had any order which met the case at all ?—That is what we have been told.

4672. You have never withheld the compensation ?—I think there have been one or two instances in which we did. They were such strong cases that we took the law in our own hands, and took the chance of letting them commence legal proceedings if they chose to do it.

4673. You complain of a borough authority not taking action against a dealer ?—I do.

4674. They went upon the idea, you said, that guilty knowledge had to be proved ?—Quite so, and that the onus of proof rested with them.

4675. Do you not know it is exactly the other way; that the Statute provides otherwise. The Statute provides that where the owner or person in charge of an animal is charged with an offence against this Act, which it undoubtedly would be, relative to disease, or any illness of the animal, he should be presumed to have known of the existence of the disease ?—Exactly so.

4676. So you see you would have been quite easy there if you had started the prosecution ?—Yes, I was very much annoyed over that matter, because I really thought it was such a flagrant case that they ought to have taken proceedings against the man, and prosecuted him. But the Town Clerk advised his borough that it would be useless, and that he knew very well they could not get a conviction.

4677. That return which you give affecting Ireland only shows the date of the outbreak and the date of the purchase. It does not show the date when the pigs were landed from Ireland ?—No, but it will show this, that supposing that any period had elapsed between the landing of the pigs and the outbreak, take a month if you will, we could never have traced it at all, we should never have supposed it.

4678. It does not show that ?—It does not show it. It is imperfect. I quite agree with you.

4679. You are aware that all the pigs, before they are shipped from Ireland at the Irish port, are inspected by a veterinary surgeon ?—Yes, but I do not suppose it would be in their power to detect the disease always. Do you know how long the disease can exist in the animal before it develops itself ?

4680. That is, I believe, a very short time; there was a witness here on Saturday who proved that if an animal had the incipient disease when shipped, it would be most likely to show symptoms of it which could not be doubted when it was landed ?—That is a new idea. Certainly we have not derived any information of that sort, because there are people who have had the idea that it might exist in an animal for a fortnight, and not develop itself, and then it might break out.

4681. They are all inspected by a qualified veterinary surgeon before they are shipped at the Irish port, and the inspector in Ireland has power, if he sees anything like disease, to retain not only the animal diseased but all animals in contact ?—A very necessary and right thing; there can be no doubt about it.

4682. (*Mr. Joseph Smith.*) Have you one inspector for the county ?—No; we have inspectors all over the county in various localities. We have not a special inspector; but we have police inspectors, if you mean that.

4683. No, veterinary inspectors ?—We have them in every locality.

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4684. And you leave it to them to say whether it is swine fever, or not ?—Yes, certainly. The police do not slaughter until the veterinary inspector has inspected and reported upon it ; it is under his authority that the pigs are slaughtered.

4685. Are they under the authority of the veterinary inspector ?—Yes.

4686. Are you satisfied that the veterinary inspectors do their work properly ?—Yes.

4687. You do not think that they condemn pigs as suffering from swine fever when they are suffering from something else ?—We have no reason to think so. Assuredly, for their own reputation's sake, you would scarcely suppose that they would do that. We have the appointment of them, and as a matter of course they come to us with good characters, and duly qualified, and therefore, of course, we can only suppose that they do their duty honestly.

4688. Do you pay them by the case or by a fixed salary ?—We pay them so much per mile travelling expenses, and so much for each case.

4689. Each case that they are called to ?—Yes. Notice is given to them by the police, and they act upon the police information. Then, of course, they pay their visits accordingly, and charge us with them.

The Rev. Leonard Charles Wood.

13 March 1893.

4690. (*Chairman.*) I wanted to ask you a few more questions with regard to the landing of these pigs from Ireland. You are aware, are you not, that under the Animals Order, 1886, where swine fever is found to exist, the inspector of a local authority can seize and detain all swine affected with that disease ; and that that applies to swine in cases of swine fever found in a market, railway station, a grazing park, or other like places, or during transit? Would not that enable you to deal with a case of any pig arriving from Ireland in a suspected condition, or diseased condition, at Fleetwood ?—It is a very curious fact that I do not think any case has ever been brought before us where a pig has been found diseased in the hands of a dealer. It is a very extraordinary fact, and it has astonished me very often. The dealers have generally managed to get rid of the animals, and to hand them over to some individual before the disease has been discovered. I do not think we have ever had a dealer come to us for compensation.

4691. Therefore none of your inspectors have ever had to make use of these powers in the port of Fleetwood ?—Not in the port of Fleetwood.

4692. None so far as you know elsewhere ?—No ; I do not know that they have.

[The Witness withdrew.

EIGHTH DAY.

Friday, 17th March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. T. CARRINGTON SMITH.
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary*.

Captain THEODOSIUS STUART RUSSELL, called; and Examined.

Captain Theodosius Stuart Russell.

17 March 1893.

4693. (*Chairman.*) You are the Chief Constable of the West Riding of York, are you not?—Yes, I am.

4694. In that capacity you have naturally given attention to the measures connected with the stamping out of the diseases of animals, especially swine fever?—I have.

4695. You are aware, I believe, that the subject-matter of this inquiry is as to the best means to be taken for amending the practice in regard to stamping out this disease?—I am.

4696. Will you kindly tell us, in the first instance, what the measures have been which have been adopted in the West Riding of York under the existing Acts?—First, the isolation of affected animals. Slaughter has been done away with within the last few years. There used to be compulsory slaughter and compensation; but that has been, as I say, abolished. The other measures have been the thorough disinfection of the premises, the burning of the litter, and so on; and the tracing where the animals came from, as far as practicable, and visiting the premises where the pigs were bought.

4697. I understand that you have practically substituted a policy of tracking out the disease, and restriction on movement, for one of slaughter and compensation?—That has been so within the last few years.

4698. What sort of success has that policy been met with?—Giving a personal opinion, I think it would not have the effect of stamping out the disease. I am perfectly convinced of that. Taking the statistics, however, I am bound to say that there has been a diminution; but I should add that I do not think that by any means there has been really a diminution. I think that really means that fewer cases have been reported to the police. When there was compensation farmers were very keen, naturally, to report. Every pig that had got anything the matter with it was reported to the superintendent, and a great deal of trouble was given in that way by farmers sending for the superintendent, in order to be on the right side in case it turned out to be swine fever. The veterinary surgeon went to see the pig, and found it was not suffering from swine fever, and so the farmer got the advice for nothing. But I think that now a great number of cases are not reported, and the pigs take their chance of recovering or of dying. As a matter of fact there have been fewer cases reported within the last few years.

4699. Can you give the Committee the number of outbreaks in the last completed year?—I can give the Committee the number of outbreaks in the last 13 weeks, but I have not the number of outbreaks for last year, as I thought the Board of Agriculture would be in possession of all those figures. For the 13 weeks ending the 11th of March 1893, in all my divisions, the number of cases of outbreak amounted to 31.

4700. How many pigs do those 31 outbreaks represent?—I have not got the number with me.

4701. Would you take it from me that there were 382 outbreaks in the previous year?—Certainly.

4702. You consider that on the whole it is likely, or indeed more than likely, as I understand from you, that the abolition of slaughter and compensation has tended to encourage dealers, farmers, and others not to give notice of the existence of disease?—I think so, certainly. It would be perfectly absurd to say that the disease had decreased because the compensation and slaughter had been abolished. It stands to reason that slaughter must tend to lessen it in some degree; but I can only account for the fact of there having been fewer cases by assuming that a number of slight cases where the swine recovered have not been reported.

4703. Do you think mistakes have often been made in regard to the character of the disease?—I think so. It is the opinion of many of my superintendents that it cannot be detected without a *post-mortem*. I do not know how far that may be borne out by statistics generally, but that seems to be the opinion of a great number of my superintendents, who have a large practical experience with the disease.

4704. Is your county closed against pigs from any other counties at this moment?—I believe not; but I am not absolutely certain.

4705. Can you give us any details upon any particular cases where you have successfully traced the origin of the disease?—No, I cannot give you any details of any particular cases.

4706. You have on the whole, you consider, met with very fair success in your efforts to trace the origin of the outbreaks?—I think fairly so; but not altogether

satisfactorily. It is a very difficult thing to do, because some of the colliers go into a market and buy a pig, and they do not know where they got the disease from. It is quite likely that the pig may have contracted it owing to the dirty state of the market, or the pig may have got it from having been in contact with diseased animals. It is almost impossible to trace it; it would be much easier for the Government to do than it is for the police on the spot.

4707. Do you mean that it would be easier for the Government to find it out?—Certainly.

4708. Now, would you tell us generally what is your view as to the best measures to adopt to stamp out this disease; in the first place I would ask you whether you think that it is possible in any circumstances to stamp the disease out?—I should say certainly; in the same way as has been done with pleuro-pneumonia and rabies. It may be stamped out by proper isolation; I do not feel the slightest doubt on that point. But I do not think it will ever be stamped out under existing regulations.

4709. I suppose you attribute the present difficulties to the variety of practice, owing to the multiplicity of authorities?—Exactly so. I do not think the stamping out can be so thoroughly well carried out as by an independent authority; as if the Government takes it in hand. I think it can never be stamped out as things are at present.

4710. Before we go to the details of that question, I would like to ask you whether you have traced any of these outbreaks to pigs coming from Ireland?—No. When I knew that I was coming here I got special information from all my superintendents on that point, and I am bound to say that none of them seem in any way to attribute it to Ireland; in fact, rather the contrary. In one case the remark is that "Irish pigs do not spread the disease as much as English-bred swine do." I do not know, however, why that remark is made, There is not in any one case any proof whatever that it can be traced to Irish pigs; I do not say that it is not the case, but that is the opinion of all my 22 superintendents.

4711. In the event of the Board of Agriculture being called upon to deal with swine fever, what part of the administration should be borne by the police, or other officers of the county authority, and what by the Board of Agriculture?—I should like the Board of Agriculture to take the whole responsibility of it. Let the police report, and the veterinary surgeon declare the case in the first instance, and then report to the Board of Agriculture; then let the Board of Agriculture take the whole matter in hand, and act in the same way as they do now with regard to pleuro-pneumonia. Of course, there is no reason why the police should not give every assistance with regard to disinfection and so forth, so far as they can without neglecting other police duties; but I think that it would be very desirable that the Board of Agriculture should take the responsibility in connection with the sale of carcases, the valuation, and points of that sort. I think that would save a great deal of the odium which may often be cast upon the police. The police could render great assistance in many ways, but I think that it would be far better that the Board of Agriculture should have a free hand entirely, and that the whole responsibility rested with them.

4712. You would, in fact, limit the sphere of the county authority to receiving from the owner, or from its own constable, the first notice of the disease, and giving notice to the Board of Agriculture?—Exactly so.

4713. After that you would charge the Board of Agriculture with the whole matter, including the superintendence of the infected place, and also the valuation of any animals slaughtered, the disposal of the carcases, and the disinfection of the premises?—And the tracing out of the disease. As regards the disinfection, I think the police might save the Board of Agriculture a good deal of trouble in that matter. Under the direction of the Board of Agriculture they could, no doubt, see that that was carried out; there would be no difficulty in that.

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4714. We have received here a considerable amount of evidence in regard to the desirability of preventive measures being more largely taken. I mean, for instance, a more rigid sanitary inspection of pig-sties, so as to prevent the accumulation of dirt and filth (which is undoubtedly favourable to keeping up the disease, although it may not actually generate it). Do you think any such measures are desirable and possible?—They are most desirable. I think that really is the key to the whole thing. It is the filthy state of these abominable pig-sties in the West Riding which I am sure has a great deal to do with it. I do not mean to say, however, that a filthy pig-sty can originate the disease. It is absolutely impossible to cleanse the pig-sties. A number of these small farmers have pigs, and they do not use litter at all. It is not like the case of a horse, where all the dung is in one place; the dung is scattered all over, and many of the farmers, to save trouble, have put in the sties, under the covered part, raised boards on cross beams or joists. These boards are not close together, so that the urine runs through, and, though the pigs are kept in a dry part, that is all soaked through into the ground underneath; and, therefore, renders it absolutely impossible, or next to impossible, to disinfect it unless the whole place is pulled down; and that is what really wants doing in many cases. Therefore, I consider that one of the principal things is to have a better class of pig-sty, and to have a number of the existing ones destroyed, and a very strict regulation with regard to them. I do not think the disinfection can be effectually carried out under existing circumstances.

4715. Now, what measure would you suggest; would you be in favour of pig keepers being obliged to take out licences, or to be registered in any way?—I think anything of that sort would be an advantage. The more stringent regulations there are of that kind the better, if the disease is to be stamped out. I am quite sure it wants very stringent regulations, and of course it would be much more difficult in the case of swine than it could be with cattle to carry out such regulations.

4716. I would like to distinguish in the question I am asking in regard to the town and the country. I suppose stringent regulation is more urgent in towns, where these pigs are very often kept in little places at the backs of houses, and places of that kind, which are quite unfit for pig-sties, than it would be in the country districts?—Probably it is, but I think both need attention. Filthy pig-sties exist quite as much in the country anyhow, though perhaps not to the same extent numerically as they do in the towns. The sort of place where pigs are kept is certainly anything but what it ought to be.

4717. You are aware that at this moment sanitary authorities can make bye-laws in regard to the position of pig-sties in towns, when they consider that the condition of the pig-sties is a nuisance injurious to human health?—Yes.

4718. Would you be in favour of extending that jurisdiction so as to allow the sanitary authority to intervene if they consider that the condition of the pig-sty is likely to be favourable to the maintenance of the disease in the animal?—Certainly. I think that powers of that sort would be most desirable. I am not speaking so much about the boroughs. I police a number of large boroughs, but a great number of the boroughs in the Riding are watched by the local police; and, of course, that is another difficulty in tracing cases, for we cannot say in many cases how far the disease comes from the markets in the boroughs which are not policed by the West Riding, but are under a different jurisdiction.

4719. You are aware that local authorities, whether urban or rural, sometimes find a difficulty in enforcing,

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sanitary regulations, because of their local unpopularity ?—There is no doubt about it.

4720. Would you be in favour of making the appointment of a county medical officer compulsory, instead of permissive, so as to give the county authority power to intervene where a small local authority was not doing its duty ?—I should certainly think that would be a good plan. I think the local authority in small boroughs is not as likely to do it as an independent authority. I think certainly that would be very desirable.

4721. You have a county medical officer of health, have you not, in the West Riding ?—Yes.

4722. (*Professor Brown.*) I gather from an answer which you gave just now that you thought the police should not be required to act after they had made the report ?—I think that it would be better for the Board of Agriculture then to undertake the whole responsibility, but the police would certainly be able to assist to a great extent, and so far as I am concerned I should wish them in every possible way to assist the Board of Agriculture, but not to have the responsibility. For instance, as I said, with regard to the sale of carcases and the valuation of cattle, and such things, I do not think that should be left for the police to be the responsible people. I think it could be far more independently done, but that the police might give useful information and help in the matter. Certainly with regard to disinfection they could help in that, and in the tracing.

4723. You see no objection to their performing the same duties as they have done in the case of pleuro-pneumonia ?—None whatever, so far as practicable, and so long as it does not interfere with other duties.

4724. You are aware, I presume, that section 50 of the Act provides that the police of each police district, or area, county, borough, town, or place, shall execute and enforce this Act, and every Order of Council ?—Yes.

4725. That, of course, implies that they should do all the duties the police could reasonably be expected to do ?—Yes.

4726. You do not think that by any machinery which the Board either possesses or could establish, it would be possible to replace the police altogether ; I mean in reference to carrying out the orders ?—Do you mean that the Board should do more than they do, even in the case of pleuro-pneumonia, and that the police would have nothing whatever to do ?

4727. I am suggesting that you do not think that it is at all possible the Board could do without the aid of the police ?—I hardly think they could ; I should say not. I think they must be aided by the police. In the first place, the farmer would give the information to the police, and the police would then give the information direct to the Board of Agriculture.

4728. I mean more particularly with regard to watching premises, and keeping up a general supervision after the notice has been given ?—I think that that might be done by the police to a great extent. It is impossible to say what might be required in order to stamp out the disease ; the measures might be so stringent that it might be very difficult to spare the men to see that the regulations were carried out, but, so far as I know, I do not see why the police should not help with regard to seeing that the orders of the Board of Agriculture are carried out. I think they certainly might do that.

4729. My question really was, do you think it is possible that the Board of Agriculture, with their present machinery, or with any machinery which they could create, would be able to do all the police work without the aid of the police ?—I hardly think so, I should imagine not. Of course I am not quite aware what means the Board of Agriculture would have, but I should think not.

4730. I think you may take it that the police would not be called upon to do more with reference to swine fever than they have done, and done in the most effective manner, in pleuro-pneumonia ?—They could certainly do that, and I should think it would probably be desirable that they should continue to do that.

4731. (*Sir Jacob Wilson.*) Are you in a position to state how many separate local authorities there are in the West Riding ?—I believe there is one general local authority, the executive committee, at Wakefield, for the whole of the West Riding.

4732. You are speaking now of the West Riding ?—Yes.

4733. How many distinct boroughs, having separate jurisdictions, are there within the West Riding ?—I have not a list of them here, but there are the large boroughs like Leeds, and so on.

4734. Would sixteen be the correct number, do you think. Look at that list (*handing a list to witness*)?—No doubt that is correct, but I was under the impression that Barnsley and Batley had not got a separate jurisdiction.

4735. Do any of those boroughs work in conjunction with the county for the purpose of dealing with swine fever ?—Not to a large extent, I should say. I think there is rather a tendency the other way.

4736. Then I gather from that that one of your great difficulties in administration is the want of uniformity between the boroughs and the rest of the West Riding ?—Distinctly so ; I think that has a very great deal to do with it.

4737. Is it your experience that there is much fraudulent concealment of disease ?—I think that there is a certain amount of concealment now that compulsory slaughter has been abolished in the West Riding. I can only in that way account for the fact that there has been actually a decrease in the number of outbreaks in the West Riding since compulsory slaughter was abolished. It is quite absurd to suppose that, because compulsory slaughter has been abolished, the disease has really diminished.

4738. May I suggest that it is also, perhaps, in consequence of the compensation being withdrawn ?—Quite so ; that, of course, is the whole secret of the matter.

4739. Have you any instances in which pigs which have died from swine fever have been buried and discovered afterwards ?—I cannot say that I have any which have come to my knowledge. It is quite possible there have been cases of that kind ; no doubt there have been cases which have not been reported, and the pigs have not recovered ; I have no doubt there must have been some cases of that kind.

4740. Do the police authorities in the West Riding make it a special duty to trace disease in the case of an outbreak ?—As far as practicable, but I am bound to say that it cannot be carried out in a very effective manner, because in many cases it is almost impossible to trace it, and then, after all, when they have come from a distance, and so on, it would be very much more easily done, I should think, by the Board of Agriculture. But they do, as far as practicable, trace the disease ; they profess to trace it out.

4741. Do you suppose that the discovery of disease might be more likely to be successful by any extra inducement in pay to the police ?—Extra pay given to the police ?

4742. Yes ?—As a chief constable, I am afraid that would not be permissible, and therefore, at the very starting point, it would not do for me to say that it would. For instance, with regard to explosives, it has always been a difficulty. It has always been held by the Inspector of Explosives that if a certain allowance is given to the superintendent for doing the work of the district, it is a great help, and no doubt it is. The same thing, no doubt, would apply with regard to this matter, but then comes the difficulty, that the police are not allowed anything extra ; it is supposed to be part of their duty. I think I ought to add that my superintendents receive half-a-crown per day as a special

duty allowance, when they go to see a case, to report whether it is swine fever or not. That is not extra pay ; it is merely that a man has to go off in a dog-cart many miles away, and is away from his dinner, and so on ; perhaps has to go to an inn to get some refreshment. It is merely meant as a sort of personal allowance in that way. Then, of course, there is the cost of the mileage as well, and the charge of the veterinary surgeon, but there is no pay to the constable, nothing extra. Anything by way of pay would be looked upon as a fee, which would have to be credited to the Riding.

4743. Is it within your experience that the important markets of Wakefield, Leeds, and other boroughs in the West Riding, are properly cemented and paved ?—I should not like to give an opinion with regard to the markets. I heard, but it is only hear say, that some of the markets are not in the satisfactory state that they should be, but I should not like to give any opinion as to the borough markets which you have mentioned.

4744. As chief constable of the West Riding, have you reason to believe, from your experience, that much of the existence of swine fever is due to the unsanitary condition of the markets ?—I should say it was. Probably the markets are better attended to than they used to be.

4745. In addition to the markets, do you attribute to the carts of dealers some of the blame for transmitting the disease ?—I do, distinctly. I am afraid the disinfection of those is not properly carried out.

4746. In your answer to the chairman you said that you thought that the registration of the owners of pigs would be a proper precaution ?—I think it would certainly, if it is practicable.

4747. Do you think it would be desirable to require that all dealers in pigs should be licensed ?—I think it would, if practicable.

4748. Do you think it would be practicable ?—I really cannot say as to whether it would be practicable or not, but I should think it would be desirable if practicable.

4749. Do you consider that requiring a licence from a dealer or an owner would be regarded as a hardship ? —I think it very likely would ; I think they would probably kick against it in the first instance.

4750. Have you any large colliery districts within your administration ?—A very large colliery district.

4751. In any of the outbreaks of swine fever in the West Riding, have you found it existing within those districts ?—Yes, very much so. I think it is very often traceable to these colliers buying pigs without knowing where they come from. They go into the markets and buy a pig. They know nothing about it, but they simply buy it in the market, and it is impossible to trace where it came from, very often.

4752. Have these colliers gardens attached to their houses, generally ?—Yes, very often.

4753. Are their pig-sties in their gardens at some distance from the houses ?—That is so, in many cases.

4754. Are those pigsties built of wood, generally ? —Very often ; and in many cases they are partially so.

4755. Have you ever thought it expedient to destroy the pigsty after an outbreak ?—I do not think that has been done, but I think it would be most desirable if it could be done on account of those boards I was speaking about. Those colliers do not use litter generally, but they put down raised boards.

4756. Are there any large herds of pigs in the West Riding ?—I imagine there are, but I cannot say.

4757. There are not, within your knowledge ?—No, not within my knowledge.

4758. Is it within your knowledge that outbreaks of disease within the West Riding have been generally traced to sources outside the Riding ?—I do not know that I could say that, because the outbreak originates, in many cases, from the filthy state of the pigsties—from the infection remaining in them. I do not mean to say that it originates in these pigsties, but once having got into some of these dirty pigsties, it is almost impossible to disinfect them properly. In many cases it comes from the outside, undoubtedly.

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4759. Now, with regard to the pig which takes the disease, is that, as a rule, introduced from a district outside the West Riding ?—In a great number of cases, undoubtedly.

4760. Do those pigs frequently come by rail ?—Yes.

4761. Have you any idea of the districts from which they come ?—I could not say where they come from. I could not say that they came from Ireland, for instance.

4762. I am not asking you whether they came from Ireland, or even suggesting that ?—I could not name any particular district where they come from. I could get information on that point for you if you wish.

4763. Have you any knowledge of pigs coming from Bedfordshire ?—No, I have not. I could get you any information of that kind, but where the pigs have come from has not been brought under my notice particularly.

4764. (*Mr. Carrington Smith.*) You say that a good many pigs come to you by rail ; in your opinion are the railway trucks in such a condition with respect to cleanliness and disinfection as to satisfy yourself ?—Speaking generally, I should say that the regulations for disinfecting railway trucks are very fairly carried out.

4765. Does disease frequently recur upon the same premises ; that is to say, in a case where there has been an outbreak of disease in a certain pigsty, do you often have a recurrence in the same pigsty ?—Yes.

4766. What interval do you insist upon between the cessation of the disease and the re-stocking the pigsty ; do you limit yourself to the 28 days, or do you insist upon a further period ?—I think it would be generally more than that.

4767. But still the fact remains, that disease frequently comes back, or appears again on the same premises ?—It appears again. Of course it may be that the pig has come from somewhere else, but at the same time I am inclined to believe that the disease has originated in the pigsty.

4768. That is to say, the germs of the disease have remained on the premises ?—Yes.

4769. That is mainly due to the fact that you say that sleepers are used for the floors of the pigsty, and that you cannot properly disinfect a pigsty without destroying them ?—Those sleepers are raised, and it is impossibe to disinfect the pigsty. The litter is not used ; if there was litter used, it could be burnt and destroyed, as it is in all cases where litter is used.

4770. Supposing there is a recurrence of disease in a certain pigsty, you would be more inclined to attribute it to the vitality of the old germs than to the re-introduction of a diseased pig ; that is to say you think that a fresh pig would contract the disease on the old premises, and not himself bring the disease in again ?—I should be more inclined to say so, but if other pigs have come on the premises, of course it would be impossible to say whether they had brought it. If no fresh pig had been brought in, it would clearly be owing to the germs not having been destroyed.

4771. Has this recurrence of disease on the same premises occurred in cases where the sanitary conditions are satisfactory—because there must be some cases where the sanitary conditions are satisfactory ? —Certainly—I am speaking off hand—but decidedly not to the same extent. These outbreaks occur generally, I think, where the filthy pigsties exist.

4772. Do you, as chief constable, exercise any supervision over the sanitary condition of the markets and sale yards ?—Yes, over those within the West Riding jurisdiction.

4773. (*Sir Jacob Wilson.*) Not in the boroughs ?—I police certain boroughs, but not the large ones, like Sheffield and Leeds.

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4774. (*Mr. Carrington Smith.*) Do you take separate action in regard to the markets without having to report to the Board in particular cases where you think it requires it?—It would be reported to the superintendent if they were in a filthy and dirty state.

4775. How long did the West Riding practice slaughter?—A few years. I believe it was discontinued in 1887, or about that time—I am not quite sure. It was rather curious that the disease increased during that time, or rather the compensation increased, I should say. I was looking at the figures before I came up and I find that it gradually increased, year by year, from some 220*l.* up to, perhaps, 1,400*l.*, within a few years. That is rather singular, but I came to the conclusion that probably more cases had been reported in consequence of the compensation, and that possibly the compensation had been given where the cases had not been swine fever.

4776. At the same time you perhaps concluded that the disease was re-imported from a fresh source after you had cleaned out the original source?—Quite so. Of course, when compensation is given, there is no doubt that an enormous number of cases are reported which are not cases of swine fever at all.

4777. I understand you that the West Riding at present does not schedule any other counties, that is, does not prohibit the importation of pigs from any other counties?—It does not to my knowledge.

4778. Did you do so when you practised slaughter, do you happen to know?—I believe so, but only for a time when the disease was very prevalent. With regard to the first question, I am only speaking off hand; the business with regard to this goes so much now direct to the Board of Agriculture and to the Clerk of the Peace, that I do not know so much about it.

4779. What particular kind of disinfection do you insist upon?—Carbolic acid is used chiefly.

4780. And you hold that you cannot properly carry out this disinfection unless the premises are in a satisfactory condition?—In many cases I think it is almost impossible unless the whole place is dug up; practically, not unless the thing is pulled down in the case of wood.

4781. Do you not pay anything extra to the superintendent of police who has the clerical work to do and that kind of thing in respect of the notice of outbreaks of disease?—Not to the superintendent, but his clerk has a small allowance, varying from 15*s.* to 25*s.* per annum.

4782. It all comes in with his ordinary pay?—Yes. Of course there is a great deal of writing involved in all these returns. It does bring a great deal of extra work on the police, I am bound to say.

4783. You mentioned the question of mileage with respect to local police inspectors. Do they not receive anything into their own pockets for the extra miles they have to go unless they hire? For instance, if a local police inspector has to walk three miles in case of a notice of outbreak, does he receive anything for mileage?—Yes, they get a mileage allowance of 2*d.* per mile each way, out of which no doubt they get something.

4784. Which goes into their own pockets?—Yes. There is a fixed charge for mileage, and it does not matter whether a man chooses to walk or drive or whether, for instance, he gets a lift with the veterinary surgeon; he would still get the allowance.

4785. (*Mr. Stephenson.*) I understood you to say that while you were slaughtering and trying to stamp out swine fever the disease increased?—The disease increased, that is to say compensation increased.

4786. More cases were reported?—Yes.

4787. It went on gradually increasing?—Yes.

4788. And when you stopped paying compensation it gradually decreased?—It has decreased.

4789. I may put it in that way?—Yes; I am speaking generally.

4790. Have you a chief veterinary inspector in the West Riding?—Yes, Mr. Carter.

4791. Does he investigate all the supposed outbreaks?—No; it would be practically impossible.

4792. Then what are his duties?—He is called in in any case of difficulty if it is thought necessary to have him—more particularly with regard to pleuro-pneumonia.

4793. I am referring now to swine fever?—I do not think he is employed in regard to that.

4794. You do not call him in regularly?—No; there is the local man.

4795. The local veterinary surgeon?—Yes.

4796. You have told us that the local authority of your county do not schedule all known centres of disease?—I believe not.

4797. You know that you have power to do so?—Yes.

4798. Do you not think it would be a very wise thing to do if you would stop the introduction of disease?—Certainly; I think it would be most desirable.

4799. Your Executive Committee, when they make orders under the Contagious Diseases (Animals) Act, I take it, send you, as chief inspector, copies of those orders?—They send me copies.

4800. And you have had no instructions that certain places have been scheduled?—Copies are sent to me, but the instructions are sent direct to my superintendents, so that I am not prepared to say whether there are scheduled places or not.

4801. As to markets and lairs, are they inspected by a veterinary inspector?—They are.

4802. Is Wakefield inspected every week by a veterinary inspector?—I have nothing to do with Wakefield.

4803. That is a private market is it?—It is a borough under a different local authority.

4804. Are there any public sales of cattle, sheep, and pigs held in your county—in regular marts?—Yes, a great many.

4805. Are they carefully looked after so far as disease is concerned, and by whom?—They are chiefly in towns which are not policed by me. Wakefield has a very large cattle market.

4806. I understand there are 16 of these boroughs unconnected with you?—Yes, and one of them, Wakefield, has perhaps one of the largest cattle markets in the North of England.

4807. You have told us that your authority do not schedule diseased places; do your neighbouring boroughs schedule diseased places?—Not that I am aware of.

4808. Can you tell me how the markets are cleansed and disinfected in your district after being used?—They are cleansed with lime.

4809. After each time of using, after each market day?—Yes, to the best of my knowledge that is the way they are done.

4810. Are they paved or cemented?—Both.

4811. Then are they washed first before being limed?—Thoroughly washed and cleansed.

4812. Is lime used every week after the market has been used?—So far as I know it is, but I am not absolutely sure.

4813. You are not certain about that?—I am not certain.

4814. Where have you traced disease to—you have sometimes taken the trouble to find out where you get the disease from, I understand?—We have sometimes traced it to neighbouring counties.

4815. What neighbouring counties, please?—I could not mention any particular county.

4816. You have no special information?—No special information on that point.

4817. You told us of the very filthy condition many of these pig-sties are in?—Many of them are in a very filthy state.

4818. Do you think it is a simple matter to dis-

infect for swine fever?—It is a very difficult matter, much more difficult than in other diseases.

4819. Have you tried to destroy these very bad sties of wood that are used?—I am afraid there is no power to do so.

4820. Have you ever tried?—I am not aware of its being done.

4821. (*Chairman.*) You mean that there is no power with regard to the diseases of animals; for, of course, you are aware that there is power to deal with these things when they are nuisances dangerous to human health?—Exactly, but with regard to swine fever I am not aware that any building has been ordered to be destroyed.

4822. (*Mr. Stephenson.*) Are you familiar with this red handbook of the Acts and Orders relating to cattle disease?—No, I am not.

4823. As chief inspector you will have a copy of this?—Yes.

4824. Are you familiar with the power referring to disinfection in the case of swine fever—what shall be done, and what may be done?—I am not personally very familiar with it, because my superintendents have all these things sent to them direct, and they really get their orders direct from the clerk of the peace and from the Board of Agriculture, and have to carry out those regulations; I do not myself.

4825. Your authority really never have made a determined effort to prevent swine fever being brought to you?—I think they have.

4826. When?—I think at the time when compensation was given.

4827. But you stopped paying in 1887?—Yes.

4828. You have done nothing since then?—I think they have intended to prevent it.

4829. You have allowed the disease to go on and the animals to die, but you have paid no compensation, and you have not protected the locality by scheduling other diseased places?—With regard to the scheduling, I would rather say that I should not like to give a positive answer.

4830. But you, as a chief inspector, would have got a copy of the order?—But I should not personally, necessarily wade through all the orders that come—there is such an infinity of orders that come.

4831. The orders from your executive must have come to you?—Every order they send me would not concern me individually. I do not send those orders to my superintendents; it is all done now direct from the clerk of the peace to my superintendents, who are the executive officers, and who carry out the regulations.

4832. May I take it that your superintendents and inspectors report daily to you as to all disease, and what is done about it?—They send me copies of the reports which they send to the Board of Agriculture or to the clerk of the peace.

4833. But you take no personal interest in it?—When I say I do not take a personal interest in it I mean that it would be impossible for me to wade through everything of that sort which comes to me, and, as I know that my superintendents report direct to the Board of Agriculture and to the clerk of the peace, it would be a waste of time in many cases for me to wade through everything concerning it. I attend the meetings of the executive committee in Wakefield.

4834. You have no doubt given a good deal of attention to this disease; do you think it is possible to stamp it out?—Certainly I do.

4835. Do you think it is possible to stamp it out by the local authorities?—I am very doubtful. I say it would be possible, but I do not think it is probable—I do not think it would be done as a matter of fact.

4836. Do you think that local authorities have already power to stamp it out; are you aware what they can do—that they may do so and so?—Yes.

4837. If all local authorities had used the power that is given to them in the orders of the Board of Agriculture, might not the disease have been stamped out before now?—I think it is possible that it might have been, but I think that the local authority are not likely to use their authority in the same way. There might be people on the committee who will have a great objection to slaughter, I am not saying there are, but I think it is quite possible there might be a strong feeling about it, and so it would not be carried out, I think, in the same independent way that it would be by the Government.

4838. Then it comes to this, that want of uniformity is the reason why the disease continues with us; may I take it that way?—I think so. I think it is possible that the powers, even if they were rigidly carried out, may not be quite sufficient, because I think greater powers are required with regard to pig sties—that is my own opinion.

4839. (*Mr. Wardlaw Ramsay.*) You said that you did not think there would be any difficulty in adopting a system of licensing the premises; did I understand you aright?—I am not aware that there would be any difficulty.

4840. Then I take it that if the condition of the pig-sties is such as you describe in your Riding of Yorkshire, in the event of a system of licensing being adopted, a very great many of those would be forthwith condemned?—Quite so, and I think that would be an excellent result.

4841. Would there not be a great opposition to that?—I think there would be an opposition to that.

4842. Would you think it advisable to meet such opposition by any assistance, any compensation?—Probably it would be only fair if a licence were withdrawn.

4843. In the first instance you would not give any?—I think it would be a very good thing if such places were licensed.

4844. The premises would have to qualify?—Quite so; if the premises were not suitable.

4845. That being so, in the event of its being necessary to destroy any premises in the process of disinfection, would you think, then, that compensation ought to be given?—I think it would only be fair and right, I must say, if such a thing could be regulated on a fair basis.

4846. Do you think any evil might arise from that, that people might contract disease for the purpose of getting a new pig-sty?—I am afraid it would be open to abuse; it would have to be very carefully done.

4847. But you think it would be open to abuse?—Yes, I do.

4848. If you do not schedule districts, what is the nature of the restriction which you would adopt?—I will not say that there are not some districts scheduled now, but it is not within my knowledge. We have very little of the disease at present.

4849. I think one of the first answers that you gave to the Chairman was that your policy now was to trace out, to isolate, and to restrict?—Quite so.

4850. I did not quite follow that—that is not a general policy?—The scheduling?

4851. Yes.—I believe not.

4852. Because the isolation and the restriction would both come into the scheduling?—Quite so.

4853. Do you declare infected places?—Yes; they declare infected places. The local authority would order an infected place.

4854. (*Sir W. Kaye.*) Do the miners in your district keep pigs?—They do very much. I think there are fewer pigs kept in the West Riding than there used to be. I think there is no doubt about it. I think I ought to mention that as another reason why perhaps there is not quite so much disease.

4855. Do you think the miners should be licensed?—I do not know why they should not be licensed.

4856. Do they keep pigs in any number individually?—I do not suppose they do in any number.

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4857. I think your evidence as regards this licensing system comes to this: that you would be in favour of licensing as far as practicable, but you do not express any opinion how far it is practicable?—I do not express any opinion as to how far it is practicable. I should only like to see the disease stamped out; and, therefore, I think the more stringent the measures, the better, the same as with rabies.

4858. Are you in favour of dealers being licensed, as well as owners?—I think so. I am not expressing an opinion as to the practicability of it, but I think, certainly, it would be very desirable that it should be done, because I believe the disease could be stamped out if proper measures were taken.

4859. Have you any statistics as to the number of Irish pigs that come to your market?—No; I have not. I have only got the answers of my superintendents, whom I asked particularly with regard to the Irish pigs. A great number of them say there is no Irish trade. I asked, "What is your opinion of the Irish trade," and I have got answers here on that point from all the 22.

4860. Your record as regards the Irish pigs is very favourable, I understand?—I have no reason to say that the disease is introduced by the Irish pigs more than by any other; rather the contrary, I think, so far as the West Riding goes, judging from the particulars I have before me.

4861. Are you able to say how many Irish pigs come to your market?—I have only one superintendent who says "I am of opinion that many cases were brought from Ireland." That is my superintendent at Huddersfield; he is the only superintendent who says so. Another superintendent in the Keighley division is of opinion that "sufficiently stringent measures are not in operation to prevent diseased swine being imported from Ireland. I have not had personal experience, therefore cannot give a positive opinion." The majority of them say they have no Irish trade.

4862. (*Mr. Stephenson.*) As you used no means to stamp out the disease in your own district, is it not likely that the disease spread from your district to those boroughs, such as Huddersfield and the other places you have mentioned?—I think it is rather the other way on. We always think we get it from the boroughs. I think we do use very stringent measures.

4863. Seeing that you have so much of it in your district and in the boroughs, is it necessary to look to Ireland or to Scotland, or to any other county for these outbreaks; have you not always the disease with you?—We have always the disease with us, but we have not much of it now, as a matter of fact.

4864. Not that you know of?—Not that we know of, that is the point. There are fewer pigs kept, and we have fewer cases reported.

4865. (*Mr. Carrington Smith.*) I have in my hand the audited account of the Staffordshire Executive, which has gone before the Government auditor; and there I find that for the quarter ending the 30th June 1891, Chief-superintendent Adams, for expenses under the Act, received 51*l.* 13*s.* 8*d.*, and for his personal services, that is, for extra labour himself, 11*l.* 0*s.* 5*d.* If I understand you correctly such accounts as those would not be recommended for payment by the clerk of your county council?—Of course I cannot say whether that is by way of actual annual allowance, or whether it is made up of mileage.

4866. I may tell you of my own knowledge that it is made up of personal visits, and of the mileage of the various police inspectors of the districts all over the county, and that this item of 11*l.* 0*s.* 5*d.* is made up by a payment of 1s. a day to Chief-Superintendent Adams himself.—I have no doubt there would be no difficulty in allowing that. I cannot conceive why a Government Auditor should object to that, because it must be allowed in my own Riding, where the 2s. 6d. is given to the superintendent. I know the local authority have rather demurred to the number of these half-crowns. With one superintendent in one division it was a constant half-crown nearly every day. He was called off by the farmers to go and see a case which very often turned out to be not swine fever at all, but still he was bound to go when a farmer sent for him. That was the case when slaughter was allowed and compensation given; he would never have any difficulty in getting it passed. He would often have to go to cases where there was something wrong with the pig, which did not, however, turn out to be swine fever at all. I believe in some cases an annual allowance is given by way of extra pay to some of the chief inspectors, but that is not done in the West Riding.

4867. May I take it then from you that supposing the police are called upon in the future to assist the Board of Agriculture in respect of reporting disease you would recommend that some scale of payment was laid down for the extra work that they had to undertake in connection with the reporting of disease?—I think I would rather not make any recommendation on that point, because it would not do to have anything done in the West Riding in that way which was not done in other counties; it would be unfair, and I should not like as chief constable to appear to be asking for it. I know there is a very strong feeling among a great number of the authorities in the West Riding that the police get their pay for performing their duty, and should not receive extra allowance for other duties. He cannot do more than his day's work, it is said. I think it would be hardly right for me therefore to recommend that.

4868. At the same time you think there would be no practical difficulty in the police assisting the Board of Agriculture?—I think not at all. I think they should certainly do it. If it was a general practice to give some extra pay to the inspectors throughout the kingdom, that is another matter, but as things exist at present I do not see how it could be received.

[The Witness withdrew.

Mr. Henry Crofts, called; and Examined.

Mr. Henry Crofts.

4869. (*Chairman.*) You are, if I am not mistaken, a member of the firm of Crofts and Sons, veterinary surgeons, at Bedford?—Yes.

4870. I think you act as veterinary inspector for the town of Bedford?—Yes.

4871. Do you hold any county appointment also?—For the northern division of Bedfordshire.

4872. You hold the same appointment then for the town and the country?—They are distinct appointments.

4873. The town of Bedford has a considerable agricultural area in it, has it not?—Certainly.

4874. The rural district attached to the town runs right into the county, does it not?—Yes.

4875. There has been a considerable amount of swine fever in the town and county, has there not, of late years?—More particularly so in the county than in the borough.

4876. To what do you attribute those outbreaks in the county?—They are not attributable to any single cause.

4877. Then what are the causes?—I put pre-eminently first the vehicles used for conveying store pigs

4878. From where do most of these vehicles come?—They come from all directions; there is no place that I could name that they come from singly.

4879. Would you tell us the places where they

come from mostly ?—I should think the vehicles used by the pig dealers resident in the county ; the vehicles used for the conveyance of pigs from the various markets, Northampton, Hitchin, St. Neots, and Wellingborough, together with those used for conveying the pigs from Bedford Market.

4880. I suppose a very considerable number come out of Bedford Market, do they not ?—Certainly, it is one of the largest pig markets, I think, within a certain area.

4881. Now what measures have been taken in Bedford city to see to the proper condition of the market ? —There are two veterinary inspectors along with myself to look over and examine the pigs and other animals in the market every Saturday. The police inspector is supposed to look after the sanitary condition of the pig-pens used by the auctioneers for the reception of the pigs. Moreover they have appointed veterinary inspectors within the past three months on special duty to go round to the various pig dealers in Bedford, and to inspect their premises and their pigs at the same time.

4882. On what days are the principal markets held in Bedford town ?—Only on the Saturday.

4883. Then this inspection takes place on Saturday morning ?—Yes.

4884. The county of Bedford has been closed against pigs from the city very frequently, has it not ? —I think from six to eight weeks ago it was.

4885. But that was not the first time ?—No.

4886. Why has the county been frequently closed against the city ?—That is for the conveyance of store pigs, more particularly from the market in Bedford, to various parts of the county.

4887. The county then I understand looks upon the city as a centre of infection ?—As one of the means. They have prohibited the conveyance of store pigs more in particular from Bedford to the various parts of the county ; but at present they do not allow any pigs to be brought into the county of Bedford in any other way than by rail from any of the adjoining counties of Hunts, Cambridge, and Herts, I believe.

4888. Pigs are now brought into the town of Bedford from the neighbouring counties through Bedfordshire, are they not ?—By rail.

4889. That is under the transit clauses ?—Yes. I suppose the county authorities have no power to prohibit.

4890. I am asking you as to the fact ?—That is what is carried on at the present time. No pigs are allowed to be brought into the county of Bedford from any of the adjoining counties by road, but they are brought by rail into the borough.

4891. They are brought into the borough, and the county of Bedford has in consequence closed its doors against the borough ?—Yes.

4892. Is that not a proof that the county looks upon the market in the town as a source of danger ? —Yes, it is certainly one of the sources of infection ; but if you look at the reports of swine fever existing in the borough of Bedford for the past 20 years, you will see there have been comparatively few. There have been more cases of swine fever within the past three months in the borough of Bedford than I have met with, I think, in any preceding half-dozen years. I have clearly got to the origin of it.

4893. You say you have got to the origin of it ?— Yes, I have traced it.

4894. Will you tell us about it ?—A person bought two sows from a certain pig dealer. After he purchased these two sows an attempt was made to move them either from the pig dealer's place or from Bedford Market ; I think it was from the dealer's place itself. One of the sows got at liberty, and ranged over the town for a considerable distance, and in the adjoining allotments of the Goldington-road. Ultimately the sow got to its destination. From a fortnight to three weeks after this I had occasion to go into a slaughter-house, and I saw a butcher who had slaughtered a sow, and was dressing it. From its appearance I thought it was a very suspicious case, in fact a case that required my further attention, so I waited until the sow was dressed, and then made a *post-mortem* examination, and I found the animal infected with swine fever.

4895. What happened then ; what did you do afterwards ?—The sow that was bought along with this one died afterwards within a few days, and was got rid of. In the first place, where the sow got to was down the embankment, and into an allotment, where there are a number of pig-pens ; about three weeks afterwards swine fever started there. A man named William Mayes owned the pigs. The sow had been on the allotment, but had not actually been in the sties with any of the pigs. It had, however, remained there a certain time. This Mr. Mayes lost, I think, half a dozen pigs, but I could not say the exact number. In addition to that, in a straight line from the piggeries, where these two sows had been kept after purchase from the dealer, I think about 50 or 60 yards off, swine fever broke out in another place, and a man named Myers lost 18 out of 20 pigs. Recently, at the beginning of last week, at another pigsty not more than 20 yards from the purchaser's place, another man lost, I think, seven or eight, and I have just cleared him out. That outbreak arose in my opinion simply from that sow racing about the borough and about allotments in the Goldington-road. I could trace no other source of the disease.

4896. That was within the limits of the borough, I understand ?—Within the limits of the borough.

4897. What did the Committee of the Borough do in consequence of this outbreak ?—They have not increased the inspections in consequence thereof, because I have reported to them daily what I have been doing, and that we are on the alert on all the pig dealers' premises two or three times a week, besides the market.

4898. I did not quite understand from your answer just now whether a slaughter order was issued in consequence of this outbreak ; did you slaughter any of the pigs ?—No, neither the borough nor the county issue any orders for slaughter, because they give no compensation. I have never had any orders to the contrary effect, but in any case where I see a suspicious case of swine fever I can seize the animal and have it slaughtered for the purpose of ascertaining whether it is suffering from swine fever.

4899. Do you not think that it must be a cause of danger to the county that when they have issued a prohibition or movement order, let us say against the county of Huntingdon, the borough of Bedford allows pigs from that same county to come into the borough, and possibly find their way into the county ?—Only by rail, but so far as the traffic in pigs is going on now within the borough of Bedford, nothing but fat pigs are sold in the market ; there is no public auction of store pigs at all.

4900. Do you not think that there must be a certain amount of danger to the county from these pigs coming in from other counties which have been pronounced to be a source of danger ?—I think it only applies with one county against another, so far as that is concerned, but Bedford being a pig market, of course, is a greater source of any evils that may arise therefrom.

4901. Can you give us any figures in regard to Bedford Pig Market ?—Of the numbers.

4902. Yes ?—I could not possibly.

4903. You have not got any that you can put in ?— No.

4904. Now, from your experience, I should like to ask you whether you think, from what you have seen, that 28 days is a sufficient time to elapse after the last case, to insure that the remaining pigs are free from swine fever ?—I do not think so.

4905. What period do you think would be suffi-

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cient?—If I was left to prescribe, I should either name three months, or that pigs should not be removed at all from those premises, unless for slaughter.

4906. You would not allow them to be removed at all, except for slaughter?—I would not.

4907. Do you think the trade would submit to such a very stringent regulation as that?—I do not think it is very stringent. Pigs are kept for fatting purposes, and they are very soon fat. Getting them fat for market is only a matter of a few weeks. In Bedford there is a market for all kinds of pigs, from about three score up to 20 and 40.

4908. Do you think that pig dealers should be obliged to take out a licence?—Yes, I do.

4909. What would be the conditions of the licence; have you any special suggestions to make?—The conditions of the licence would be something like that of other persons taking out licences, they would be supposed to carry on their business in a respectable and responsible manner; and in default thereof they would be liable to lose their licence as dealers.

4910. You would, I suppose, make it a condition of a pig dealer's licence that he should comply with all conditions as to disinfection of carts and things of that kind?—I should so pre-eminently.

4911. In answer to a question I asked you, you have just now alluded to the transit of pigs; are you satisfied with the manner in which the railway companies carry these pigs from a sanitary point of view?—I do not think the floors of the trucks that I have seen are so constructed that they can be possibly thoroughly cleansed and disinfected. If a diseased pig gets into one of these trucks, the cavities in the bottom of the trucks, that I have seen, must be a source of retention of what is called the fæculous matter from the diseased pigs. It is a most difficult matter for those men who are left to clean these trucks out to get sufficient time to thoroughly cleanse them in the first instance. I do not think that is ever done. I think they are cleansed according to a general routine and then over goes the lime, and then, if you send a lot of healthy pigs into a truck which has been previously occupied by diseased pigs, and this fæcula has been moved up from beneath the lime, you have got the infection at once.

4912. What alteration in construct on would you prescribe, can you give us any suggestion?—I think it is most simple, that the floor of these trucks used for the conveyance of pigs should be moveable, that they should simply slide, so that they could be taken out and cleaned and put back again. I think the expense and trouble would be very little, and I believe it would facilitate very much the men's work.

4913. You told us just now that you would be in favour of pig dealers being required to take out a licence; would you be inclined to extend that to pig keepers generally, so as to compel pig-sties and places where pigs are kept to be in a proper condition?—Not as to pig keepers.

4914. You think that would be impossible?—I think that would be going a little too far.

4915. You think such a law could not be enforced?—No, I think it would be a little too severe. There are several men about Bedford that I know who have no other visible means of getting their living than by pig dealing, and those are the persons, in my opinion, who should be required to take out a licence, because they could be better got at; they would allow themselves to be better got at, by having a respectable position to hold, and having responsibility cast upon them.

4916. Then you would be in favour of licensing pig keepers, in any case, of a certain class?—Pig dealers, not pig keepers.

4917. I suppose the exact line between a pig keeper and a pig dealer is sometimes rather difficult to define, is it not. I mean a pig keeper may be a pig dealer, and very often is?—I think he would be very soon got at if he was found sending pigs to Bedford market, and attending other markets and buying pigs and sending them about the country in every direction; and, in fact, a lot of them would trap themselves by advertising pigs for sale.

4918. (*Professor Brown.*) You said you saw a certain sow in a slaughter-house killed, or saw it after it was killed, and that you found it had swine fever?—Yes.

4919. Of course the manure from that animal, and probably some of the diseased parts, would go into the manure heap?—Yes, but it was all buried, everything that could be collected was buried along with the sow.

4920. In that particular case you saw it?—Yes.

4921. But of course there are many cases of pigs being killed in slaughter-houses with swine fever that you do not see, and that no one sees?—I should think a great many.

4922. Then would you consider that the manure from a slaughter-house is necessarily contaminated with the infective matter of swine fever?—In cases where it can be traced that diseased pigs have been slaughtered.

4923. But in cases where it is not traced the thing would be exactly the same, would it not?—Perhaps it would be acting upon the safe side if the refuse of all pigs, bowels, &c., the intestinal contents, were required to be burned. That would be acting in a certain direction of safety.

4924. Speaking entirely with reference to the stamping out of swine fever, would you think it a good regulation, if it were practicable, to require that in all slaughter-houses where pigs are killed, the pig manure, and any offal of the pigs, should be disinfected?—Certainly, and buried as well. I should go further than disinfecting, because I think disinfection is most imperfect.

4925. You would have all the matter in which there was likely to be any infection actually buried?—Yes, that is what I should recommend.

4926. Have you any opinion as to the practicability of such a regulation as that?—I should not think it would be very much trouble, nor would there be very much complaint against it.

4927. That is to say, you think the regulation might be made to apply to all the slaughter-houses in the country?—Yes, where the pigs are slaughtered.

4928. You said just now that in cases where the contact pigs are not killed, you would shut them up for their natural lives?—That would be the safest plan.

4929. Your reason for that is probably that there may be cases of swine fever occurring in those pigs without any outward symptoms?—Without any external symptoms.

4930. So that the only safe course is, to see that they go to the slaughter-house when they are moved at all?—Yes.

4931. You said that the condition of the railway trucks made it extremely awkward to disinfect them, and you suggest that the part on which the pigs stand should be moveable?—Yes.

4932. You are aware, of course, that the trucks are not only used for pigs—that they are used for other animals?—Certainly.

4933. Do you think that same regulation would be consistent when other animals, sheep for instance, or cattle are carried, or would you limit it to the carriage of pigs?—I think it could be done universally with the moveable bottoms.

4934. You make that recommendation, being, of course, fully aware that the Board have at present no power to alter the construction?—I am quite aware of that, at least I think so.

4935. But you think that in taking further powers, it would be desirable that they should introduce some such clause as that?—Yes.

4936. In your own experience, what the railway companies say is quite true, that the disinfection of the bottom of the truck is almost impossible?—Any

person having any knowledge whatever of cleansing and disinfection could say that it was almost impossible to either cleanse or disinfect those trucks, with the receptacles in the bottom.

4937. To thoroughly scrape any one of those compartments would probably occupy a man for half an hour?—He would not do it in three, or under four hours, properly.

4938. I mean one of those small squares?—Yes, and he would have to have a small instrument to scrape it out.

4939. And he would have to carry that over the whole of the bottom of the truck to make it effective? —Yes.

4940. (*Sir Jacob Wilson.*) Do I gather that you have an official connection with the county as well as the borough?—Yes.

4941. Am I right in assuming that there are from 700 to 800 acres of land within the borough boundary? —I could not say the amount of acreage.

4942. But you know that it is considerable?—Yes, certainly.

4943. And much of that is laid out in allotments and gardens?—Yes, a great deal of it.

4944. Are piggeries distributed over that area?— The greater portion of them.

4945. Seeing that you have devoted so much attention to matters connected with pigs in the borough of Bedford, can you give us any idea of the number of pigs kept within that borough?—No, I could not, because they vary so; I can give you instances of two dealers that I went to on Tuesday last. I sometimes go and find 25 pigs there. On Tuesday last, on one premises, there were 138 or 139 pigs, and on the other there were 79. I sometimes go to those places and do not find any, the numbers vary to that extent.

4946. Exclusive of dealers, have you any idea of the number of pigs kept by the inhabitants of the borough?—No; I could not say that.

4947. Can you inform the Committee of the average number of pigs sold in the Bedford market?—Not with any absolute correctness.

4948. Give me an approximate number?—200 or 300.

4949. And you call that a considerable number?— Yes. Sometimes it is exceeded, sometimes there may not be so many; but at the present time, in consequence of these restrictions, there is no store pig market at all; nothing but fat pigs are sold in Bedford market now.

4950. Do I gather, then, that at certain periods of the year there are greater numbers than those which you have now mentioned?—Yes, certainly.

4951. What is the greatest number you suppose ever were known in Bedford market?—It has escaped my memory; I may have known at one time, but I could not say with anything approaching correctness.

4952. Do you attribute much of the reason for disease emanating from Bedford to the very extensive nature of that market?—Certainly; to the number of people coming there who do business.

4953. Are you aware that in the county of Norfolk there are several markets with double the number of pigs that there are in Bedford?—I am not.

4954. Then you do not know the numbers there, but you may take it from me that no disease has been traced from those markets, although the numbers are double the amount at Bedford?—I will refer you to a case where I detected two pigs on a certain pig dealer's premises in the month of January. They came direct from Cambridge the day before, and were traced from Cambridge down to Norfolk.

4955. Your market is on Saturday?—On Saturday only.

4956. When do the pigs begin to arrive for the Saturday's market?—From 9 o'clock up to 12 or half-past 11 in the morning.

4957. Do a certain number of pigs come by rail?— Certainly; especially now.

4958. When do they arrive?—I could not tell; they arrive at all times; they may arrive the day before, or on the morning of the market.

4959. So that a certain number of those pigs must arrive probably the day before, or during the night before?—Yes.

4960. Do you inspect the pigs for Saturday's market on Saturday morning?—On Saturday morning, while they are in the market.

4961. So that it is quite possible, that if a dealer detected a pig diseased on his premises during the Friday night, he might have it removed before your visit?—Certainly.

4962. Then the fact of your visit and inspection is no guarantee that a diseased pig had not been there within the past 24 hours?—Certainly not, because they are so quick in their removals.

4963. Have you ever made a practice of administering treatment to pigs suffering from swine fever? —I have never yet. The only thing I have recommended in the treatment of pigs suffering from swine fever, is to give them a little linseed oil in the bran or milk.

4964. What is your experience as to the number of pigs that recover from swine fever?—I have not tabulated even that, but there are two distinct forms of the same disease.

4965. I refer to what is understood as swine fever at present, I mean?—I take them all as swine fever.

4966. Do I gather from you that swine fever is difficult of detection?—One form of it—the mild type.

4967. How many forms of swine fever do you include under the name of swine fever?—The lame form and the latent form, where there are no external symptoms whatever.

4968. The external symptoms are confined to the latent form, are they?—In one form; there is a severe form.

4969. Are you able to detect erysipelas in the pig? —Yes, certainly.

4970. Do you consider that to be one of the forms of swine fever to which you have alluded?—I have never been able to trace a mixture of the two diseases together as yet.

4971. (*Mr. Stephenson.*) You have never seen them together in one pig?—No.

4972. (*Sir Jacob Wilson.*) Therefore you distinguish erysipelas from what is understood as swine fever?—Yes.

4973. I think you have not answered my question as to the number, in your experience, that recover from what is generally known as swine fever?—In the mild form, or in the other form—what is called the lame form?

4974. Take it in your own way. Let me have the number in both forms?—Taking both, I should think 50 per cent. of each kind; the number of recoveries in both the latent and the lame forms is pretty level so far as I have taken notice from memory.

4975. Is that without treatment?—Without treatment.

4976. At what age have you generally observed the disease?—In all ages.

4977. Do the number of deaths vary much according to the age of the pig?—Certainly; the younger the pig, the greater the number of deaths.

4978. Is it within your experience that there is much fraudulent concealment of disease?—A great deal.

4979. Do you believe that many pigs are put out of the way and buried before you have any opportunity of discovering the disease?—Certainly.

4980. Have you ever had an opportunity of seeing a pig that had been previously buried and afterwards exhumed?—Yes; I could not say the number of cases, but several times.

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4981. Has that led to a case of prosecution?—Yes.

4982. And conviction?—Yes.

4983. Do the authorities of Bedford regard swine fever as a serious matter?—A portion of them do; I would say the majority of them do, but I have not seen anything like a demonstration of their feelings in that respect.

4984. Is it your opinion that the form of conviction as exercised at Bedford, has had any deterrent effect?—Very little indeed.

4985. Can you give the Committee any idea of the form of punishment that is dealt out by the Bench at Bedford?—About a few shillings and costs.

4986. How many dealers reside in the borough?—I could not tell you how many, because there are so many of them. I could not count them up. They are a great many more than you know of—than ever have had their names in public.

4987. Seeing that you have to pay these frequent visits to the dealers, I take it that you have on your own books some record of the names, numbers and residences?—I could give you the names and addresses of, I daresay, eight or nine.

4988. But there are many others?—There are many others who deal in a small way. They get a few pigs, and the moment they see a chance of selling them to get a little profit they sell, and away they go into market to buy a fresh lot in.

4989. Do you suppose we are within the mark in saying there are 20 pig dealers of one sort and another within the borough of Bedford?—I would not say with certainty. I should not be at all surprised if 20 pig dealers were found there if they were looked up.

4990. Are you aware whether any pig clubs exist in Bedford?—I am not aware of any. The butchers have formed an association.

4991. That is for tuberculosis, is it not?—No, it was simply formed in opposition, I think, to the council forcing them to use a public slaughterhouse.

4992. But that does not specially apply to pigs?—That has not specially to do with pigs, but I do not know whether the two were combined together.

4993. Have you many instances in your experience where a second case of disease has broken out on the same premises?—A great number I should think, but I could not give you the number. I could give you the history of one which happened very recently if you like.

4994. Is that a very frequent occurrence within the borough of Bedford?—Not within the borough, it is in the county that I have met with it.

4995. I am speaking of the borough at this moment. Have you any instances of a second case breaking out in the same premises in the borough?—Not in the borough.

4996. To what do you attribute it?—To imperfect cleanliness and disinfection, and, moreover, to what is called the latent form of the disease, and to parties being given licence to move after the expiration of 28 days, when they had pigs suffering from swine fever on the premises in what I call a mild form of the disease.

4997. Have you known many instances of disease having been traced to other places from Bedford market, or from the borough of Bedford?—A number of cases of pigs which have passed through Bedford market.

4998. And the disease traced to Bedford market?—To pigs that had been in Bedford market. I have traced pigs having disease in them before they had gone to the Bedford market, and then they go back again, and Bedford has got a greater name, you must understand, for being a nest of this swine fever than it ought to have.

4999. Do you consider it a part of your duty to trace the disease?—In every case of swine fever that I attend I try to find out the core of the outbreak, and I could tell you a number of them at different times.

5000. Whose duty is it to draw your attention to the case of an outbreak?—It is the duty of the police.

5001. So far as you know, is that duty carried out properly?—Yes, I believe so.

5002. Do you take any special interest in knowing where the pigs from Bedford go by rail?—They go from Bedford in all directions; into Scotland, into Ireland, and into Wales.

5003. Do you consider that, generally speaking in the county, the fairs and markets are a fruitful source of disease?—During an open condition of the market it has been proved so.

5004. In your opinion, is the market at Bedford carefully looked after from a sanitary point of view?—It is, certainly.

5005. I believe you have in the borough of Bedford several pig dealers who do not themselves possess any pigs?—At times.

5006. These men do their business in a great measure by advertising?—Yes, I think most of the pig dealers do their business by advertising, but some more than others.

5007. Is it within your knowledge that that is a form of business peculiar to the county of Bedford and borough of Bedford?—It is carried on by the people in the borough, but I have no knowledge as to the extent to which it is carried on at any other place, because I never took the trouble to inquire.

5008. I gathered from your evidence that in your opinion there is a greater amount of disease disseminated by the dealers in the county than by the dealers in the borough of Bedford?—I do not blame one set; I do not exonerate one dealer against another by any means whatever.

5009. Have you been able, personally, to trace a greater amount of disease to dealers in the county than to dealers in the borough?—I could not say so.

5010. Do you know of any important cases of conviction which have taken place in other parts of England, against dealers either of the county or of the borough, where there have been heavy fines imposed?—I have seen it in the papers.

5011. You have given us an instance of a pig dealer to whose action you attribute the recent outbreak of disease; have you known any convictions brought against that same pig dealer?—I do not know that I can remember any.

5012. With reference to railway trucks, in which you recommend false or moveable bottoms, would you have those specially built for pigs only?—That would be just at the option of the railway company, because that would be equally useful for one kind of animal as for another.

5013. Do you think that it would be any improvement on the present condition of things if the Board of Agriculture administered the law in case of further outbreaks of swine fever?—I think it would.

5014. (*Mr. Stephenson.*) I understood you to say that there was nothing but fat pigs sold in Bedford?—At the present time.

5015. What distinction do you make between fat pigs and store pigs?—Fat pigs are sold for immediate slaughter.

5016. Then all the pigs shown in Bedford are slaughtered immediately after sale?—Sometimes in the course of a few days.

5017. Are they allowed to leave Bedford?—Only by rail.

5018. Have you any notice of them after they go away from the market?—Not any.

5019. Then you are not sure that they are all slaughtered?—I suppose they are slaughtered.

5020. You have no trace of that?—I have no trace.

5021. You could not prove it?—The store trade is entirely suppressed in consequence of the prohibition of bringing store pigs from any part of the county

into the borough or from any other county beside the county of Bedford.

5022. Then where do these pigs come from that get into your market?—They are brought into the borough from the neighbourhood in all directions—they are fat pigs.

5023. Would there not be a great number of half-fat pigs which are really stores?—I have not noticed any in looking round.

5024. That is on the Saturday?—Yes.

5025. What days are your sales on? — On Saturday.

5026. It is all done on the Saturday?—Yes.

5027. What means are taken to disinfect these markets and marts?—The pig markets are particularly well washed and cleansed and lime-washed. I have no reason to complain.

5028. With reference to the sow that ran away and caused several outbreaks of disease, where did that sow come from?—That I cannot tell you.

5029. You do not know where she came from?—It was one of those pig dealers whom I have mentioned. He sold it to the man.

5030. What was done at the place where that sow came from?—I never found that out. I left it to the police.

5031. You never found the place?—Not from whence it come. I only knew that it came from the dealer to the person who bought it from him.

5032. You told us that you had a power to seize and slaughter, as a test case, any animal that you suspected of swine fever?—Yes.

5033. And you do?—I have never had any orders to the contrary up to the present time.

5034. That you do?—And remunerate for that single pig.

5035. Do you do that now; do you understand that that is in your power?—I understand that that is in my power.

5036. Have you done so within the last three or four years?—No, I have not, because I have had no trouble with the owners of the pigs; they have slaughtered them off on their own responsibility when they have known I have wanted to make a *post-mortem*.

5037. Are you aware that you have no power to slaughter a pig as a test case?—I was informed I might do so at one time both by the borough and by the county, and it has never been revoked.

5038. Tell me how your railway trucks are cleansed?—I have never witnessed a man doing it.

5039. You never saw one cleansed?—No. I have seen a man daubing the limewash all over the place.

5040. Have they not a good water supply and hose-pipe the same as in other centres?—They may have. I would not say they have not got it.

5041. What system of railway does this apply to; the London and North Western or the Midland?—I should think both; I am thinking of the kind of truck I have seen pigs in; with receptacles in the bottom.

5042. Is there a proper place for cleansing the trucks?—Only the loading places.

5043. There is nothing but the loading places?—Only the loading places. I am not aware of any other.

5044. Have you seen many trucks cleansed in any other parts of the country?—No.

5045. All your experience of truck cleansing is at Bedford?—Yes.

5046. And there are no special means for cleansing there?—Not that I am aware of. I do not know what arrangements the railway companies make. I have seen the men at Bedford doing it. I do not know of any place, bear in mind.

5047. Now tell me about the disinfection. How would you carry that out in regard to infected places and sties?—By thoroughly washing in the first place.

5048. With water?—With hot water.

5049. That is the first thing you would do?—Yes. Then I should disinfect and then cover with limewash all over.

5050. What disinfectant would you use?—Carbolic acid—I do not know of anything better—or chloride of lime.

5051. What would you do with the litter and all the loose material?—Bury it.

5052. What would you do with the feeding-trough? I should prohibit the use of it for about a couple of months.

5053. If it was made of wood?—Yes.

5054. If it was made of fireclay glazed, what would you do?—If it was made of iron or clay it would be a different thing altogether, because those things can be immediately cleansed and disinfected.

5055. Have you pigsties built of pieces of wood?—Yes, a great many more of that kind than of any other.

5056. Have you ever burned any of them along with the bedding?—No, I have not done so.

5057. Do you not think that would be a very effectual way?—Yes. I have wished to do so a great many times.

5058. What do you think of the flooring of the pigsties?—It is simply bricks put on the loam on the allotment grounds; in some cases it is a few slabs.

5059. You could not disinfect that?—Certainly not; it would be impossible.

5060. Do you see any objection to cement floors for piggeries?—I should think they would be the proper thing, but they would be required to be drained as well.

5061. Now as to the three kinds of swine fever that you have told us of. There is the lame, the latent, and some extremely severe form?—The acute form.

5062. Is it possible for a pig to suffer from swine fever without showing any external appearances?—Yes.

5063. Is it possible for a pig to die of swine fever without showing the usual swine fever lesions?—Certainly.

5064. You think it is?—Yes, externally.

5065. I am speaking about the *post-mortem* lesions?—Of course I find the *post-mortem* lesions. If a pig dies from swine fever you prove it on the *post-mortem*.

5066. What *post-mortem* lesion would you expect to find?—The ilio-caecal ulcerations.

5067. What else?—In the mild form it is simply congestion of the liver, but I take it the immediate cause of death in those cases where pigs have grown and fed quickly, as if they were in apparent health, is simply heart disease—collapse.

5068. That is not swine fever, though?—It is the result.

5069. The result of swine fever?—Yes, that is proved by the lesions in the ilio-caecal valve and the caecum.

5070. Do they die rapidly?—Eat a hearty meal, and die directly afterwards.

5071. Thriving apparently?—Previously.

5072. Die suddenly?—Yes, in numbers of cases.

5073. With heart disease?—Yes.

5074. And *post-mortem* lesions of swine fever in the bowels?—I think failure of the heart's action results in consequence of the diseased condition of the blood.

5075. Have you examined the heart internally?—I have simply looked at it as far as I could discern, but I could not detect anything.

5076. Have you looked at the valves?—No, I have not.

5077. In those very acute cases that you referred to, what are the symptoms externally?—The external symptoms are the ecchymosis all over the body, pretty

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frequently with diarrhœa, and sometimes acute pneumonia as well.

5078. How long do they live?—They go off in various times, but generally in the course of a few days.

5079. In the *post-mortem* of these cases what variations do you find?—Only the extension of the disease; about 20 times in comparison.

5080. That is so far as the bowel lesions are concerned?—Yes, that is so. There is immense congestion, ecchymosis through the whole of the bowels, and sometimes the whole of the caecum involved in ulcers—one perfect mass.

5081. What condition do you find the lungs in?—Pneumonia.

5082. Pneumonia?—Yes, more or less; some more and some less.

5083. Any consolidation in the lobules?—Certainly, with almost every case you get you find the grey hepatisation.

5084. Do you find effusion in the thorax?—Very little.

5085. Do you get pleuretic adhesions?—Yes, with lymphous exudation at times, and the bowels glued to the walls.

5086. Do you get effusion into the abdomen?—Just a little; a very little.

5087. Have you seen any swine erysipelas?—I think I have seen a few cases, but not very recently.

5088. Do you think that is an infectious disease?—Certainly; I should take it to be so.

5089. Will you tell me the symptoms you have observed in swine erysipelas?—Intense redness of the skin, painful and swelling.

5090. Is the skin painful?—Painful to the touch.

5091. Where is the swelling?—Beneath the skin.

5092. The swelling is beneath the skin?—Yes, in the cellular tissue apparently of the skin.

5093. Subcutaneous?—Yes; but I have not had any great experience in those cases in pigs, so you must not take me as a great as a great authority.

5094. Have you made a *post-mortem* of such a case?—No, I have never made a *post-mortem* of such a case.

5095. Then you cannot speak upon it with any great deal of confidence?—No; and I do not want to be taken as an authority on this, because I have had very little experience of it.

5096. Am I right in putting you down as saying that 50 per cent. of the pigs recover?—In the mild cases I should think so.

5097. Fifty per cent. recover?—Yes, in the mild and lame cases. That is from actual observation.

5098. How many of these severe cases, think you, recover; what percentage of them?—About 5 or 10 perhaps, or 15, just as the case may be. I have just had a case now where 18 died out of 20 suffering from the acute form.

5099. In reply to Sir Jacob Wilson you said that you had once traced diseased pigs into Bedford Market?—I have traced them so far as report is concerned; the pigs have come from Bedford Market.

5100. Into Bedford Market, I am talking about. You distinctly said, in reply to Sir Jacob Wilson, that you had traced diseased pigs into Bedford Market?—They are brought into Bedford Market by all means, but I have no recollection of pigs to my knowledge having been known to be diseased previously, and then taken to Bedford Market, and I did not mean to say that.

5101. But you distinctly said so?—No, not in those words.

5102. You said that you had traced diseased pigs into Bedford Market?—I have myself detected several cases, suffering from the disease, in the market, but that is apart from tracing them to their origin from other places.

5103. In these cases, where you detected diseased pigs in Bedford Market, did you trace backwards to see where those pigs came from?—Certainly.

5104. How was it that those diseased pigs got away from the diseased place into Bedford Market?—Because they never gave notice to the police in the neighbourhood of the fact of their having swine fever on the premises.

5105. (*Mr. Carrington Smith.*) Are you satisfied or dissatisfied with the manner in which pigs are kept in Bedford?—I should be very much better satisfied if they were kept in a better sanitary condition.

5106. Then you are not satisfied?—No, not as far as that is concerned.

5107. Are you satisfied or dissatisfied as to the manner in which the pig trade is conducted in Bedford?—I think it might be carried on more respectably.

5108. Then you are not satisfied?—No.

5109. Do you consider that the cleansing and the disinfection of the railway trucks is satisfactory?—I simply make the observation on that, that I think it is impossible for them to cleanse and disinfect the bottoms of the railway trucks which are used for the conveyance of swine fever where there are square receptacles.

5110. Did I understand you rightly to say that the railway companies applied a washing of lime on the dirt existing in the trucks?—I should think so.

5111. Do you know so?—I could not trace it. I infer that from cases that have occurred to me of pigs being conveyed by railway, which I have known previously to be healthy, and then afterwards in a few days found suffering from swine fever; that is my inference.

5112. Then do you attribute the sources of disease to contamination in railway trucks frequently?—In some cases.

5113. There is a certain pig dealer of whom you have heard a good deal, but you say you do not know that he has been prosecuted. Do you know whether he has ever been prosecuted by any other county authority?—I fancy he has.

5114. He has not been prosecuted by the Bedford county authorities, or by the Bedford borough authorities, has he?—Not that I am aware of.

5115. But you think he has been prosecuted by other authorities farther away?—Yes.

5116. Now, with respect to the floors in pigsties, I take it that you would recommend an impermeable floor?—Certainly.

5117. What would you say with respect to the drainage?—They should be drained as well, so that the place can be washed out.

5118. Where would you put the drain traps?—Let there be a cesspool if there is no other convenience.

5119. Would you have the drain traps, inside the pigsty or outside?—Outside.

5120. Do you take it then that in the severe types of the disease there is always an outbreak on the skin?—Yes, in every case in the severe type I should think so, more or less, some greater and some less.

5121. You spoke of having had something to do with the exhumation of animals that had been buried, you cannot exhume pigs except by authority of the Board of Agriculture, can you?—I take it that if a pig has been buried under the Act it cannot be exhumed, but if a private individual had lost a pig and he has made a hole in the ground, on my appearance there I can have it exhumed, because, in my opinion, it does not constitute an exhumation as I read the Act.

5122. Then you take it upon yourself to exhume pigs under suspicion, without any order of the Board?—In most cases. I ask to see the dead pig, and I order them to do the one or the other.

5123. You very frequently find that this pig is very insufficiently buried, I take it?—They make a hole, and sometimes you can scratch it with your fingers and fetch it out, and that is hardly an exhumation.

5124. Do you prosecute in such cases?—Yes; the county more particularly.

5125. But you say the magistrates only fine a shilling or two?—A few shillings. I think the fines have been out of proportion to the magnitude of the offence.

5126. I think I take it that you do not believe very much in the efficacy of disinfection?—Certainly I do, but the premises must be suitable so that the cleansing and disinfection can have an effect.

5127. I think I understood that even where premises have been disinfected you ask for an interval of three months to elapse before fresh pigs were brought on the premises?—I meant the kind of premises that are used for keeping pigs, where it is impossible either to cleanse or to disinfect.

5128. We will take it that the premises are in a sanitary condition, with impermeable floors and external drains properly trapped outside, then I understand you would require a considerable interval of time?—Certainly, over the 28 days.

5129. You talk of dealers' carts having been a frequent source of giving the disease; have you ever used any supervision over the condition of the carts?—In the borough time after time.

5130. And you insist upon their being washed and disinfected?—Certainly.

5131. Even in a case where there has been no disease?—Simply if the vehicle has been used for conveying pigs, before it is used again they are to cleanse and disinfect.

5132. Do you think that has been efficiently carried out?—Of late it has.

5133. Would you recommend a moveable bottom for the carts as you do for the railway trucks?—Certainly, I would do that. I think it would help considerably.

5134. With a slide?—Yes.

5135. You spoke of having slaughtered on suspicion in several cases; of course, you compensate for the particular animals slaughtered on suspicion?—It has been done, but I have not had reason to carry it out of late. It has been done simply by the owners on their own responsibility, for one reason the cases have been of the hopeless kind, and the owners simply kill them to get rid of them, and so afforded me an opportunity for a *post-mortem*.

5136. They do not claim for compensation?—There was no claim when they killed them themselves.

5137. I think I understood from you that when you did slaughter on suspicion you did not receive very much support from the owner of the pig, because he had no further claim for compensation and slaughter with respect to the other pigs in contact, consequently you consider that is almost a dead letter?—It is a dead letter so far as that is concerned. I dare say it is some years now since I have slaughtered pigs on that principle.

5138. Do you think then that if the slaughter of all diseased pigs and all pigs in contact became a universal custom the owners of the pigs would help you more than they do now, and that they would be willing to co-operate with the Board of Agriculture in getting the disease stamped out?—I had a lot of experience during the slaughter period; the compensation period; and I was suspicious in a great many cases.

5139. Suspicious of what?—It was not carried out with the intended object, with the result that was expected. I think that the attempt was not to buy diseased pigs or sell diseased pigs, but to buy pigs that were not so right so that if there was anything wrong with them they would get compensation.

5140. The diagnosis of the disease resting with you; you would never decide the disease existed unless the disease had existed?—Certainly not, that is another matter.

5141. Then the owner of the pig could not come under the Slaughter Order?—They gave notice when they knew they could get compensation; they were wonderfully forward in all those cases then, in giving notice of the existence of swine fever, and in some cases where it was not swine fever.

5142. Did they frequently give you notice when there was no swine fever?—Yes; several times.

5143. Still you would not think that there would be any reason for slaughter being carried out for an improper motive so long as the diagnosis of the disease rested in the hands of a competent authority; or do you think that the owner of the pig could give the disease on purpose?—He might nurse it. I have given you my opinion. I think that any pig should not be removed from the premises alive for any other purpose than slaughter.

5144. That is when the disease had once existed?—When the disease had once existed on certain premises. There would be no inducement for the owners to nurse or get the disease; but there would be every inducement for them to get their pigs forward fit for slaughter and thereby get rid of the disease.

5145. What do you mean by nursing the disease?—I think the inference is easy. I durst not say what I know, nor what I think I know about that.

5146. Do you think a man could originate the disease if he liked?—He might give it encouragement.

5147. By importing germs?—I do not like going much farther than I have done. I think the inference from what I say is sufficiently plain, that during the compensation period, when all the pigs were slaughtered, it did not answer as the county authorities expected it would have done.

5148. Do you think that such a system would answer if it were in the hands of a central authority, and were carried out under the same regulations as now exist in pleuro-pneumonia?—I think the other would be much better.

5149. The Board of Agriculture, do you mean?—If the Board of Agriculture took it it would be much better I think never to allow any pigs to be removed from any premises where disease had once broken out.

5150. Do you think the disease might be stamped out if the work were undertaken by a central authority?—I think so, because in every case I have traced it to infection; that is, so far as my experience goes.

5151. Would you recommend that a transference of power should take place from the local authority to one central authority?—Yes, I think so.

5152. (*Mr. Wardlaw Ramsay.*) I do not wish to ask you to mention any names; but have you any reason to believe that disease has been deliberately introduced?—I durst not say so.

5153. I do not ask you to give any names; have you any reason to believe that disease has been deliberately introduced?—I believe that there has been a lot of carelessness in that respect.

5154. Perhaps that is hardly answering my question. I have based this question upon what you said in answer to Mr. Carrington Smith. I rather understood you to infer that in some cases the disease had been deliberately introduced for the sake of compensation?—I have never said that it was deliberately introduced, you must not take that.

5155. It was an inference rather. Did you consider that the action of the county local authority in closing against the Borough, was a necessary precaution?—Certainly.

5156. But I think you said that there was more disease in the county than in the borough?—Yes.

5157. Did the borough close against the county?—No; they have not done so up to the present.

5158. Do you think they should have done so?—No, I do not think, so far as fat pigs are concerned, there is any necessity for stopping the sale.

5159. Did you not say that the county was more

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stringent in its prosecutions than the borough ?—They are inclined to be so.

5160. Can you give me any reason for that ?—No.

5161. Are you consulted by the local authorities as to what is the best thing to do ; were you consulted, for instance, as to the closing of the county against the borough ? — I was consulted ; but it was momentarily. When I was inspecting pigs in the market on the Saturday I was sent for by the County Council Executive Committee. They sent for me to go up, and I was asked a few questions as to what I should suggest regarding the prevention of the extension of swine fever.

5162. Then do you attribute the greater stringency as to prosecutions in the county a good deal to outside influence bearing upon the local authority in the borough ?—I simply tell you the result. I cannot go any further.

5163. Are there many dealers or others interested in the pig trade on the local authority either for the county or for the borough ?—No, not that I am aware of.

5164. No dealers or others interested in the trade ? Not that I am aware of.

5165. Would you consider it suspicious if you found lean or half-fat pigs exposed for sale in a fat market ?—I should use my judgment upon the appearance of them.

5166. Would you consider it a suspicious thing ?—Not necessarily.

5167. Under what circumstances would you think that a man would send lean pigs into a fat market ? —Being in want of funds, being short of money, perhaps not having the money to keep his pigs on.

5168. Wanting to realise ?—Yes.

5169. Have you ever known lean pigs exposed for sale in the fat market at Bedford ?—Not in the fat market at Bedford.

5170. Never ?—Not that I know of, at least not at the present time.

5171. Although there are no store pigs sold in the Bedford market, is it not the case that there are many dealers in Bedford who deal in store pigs, but never go into the market ?—Yes.

5172. Do you know any dealers in the county of Bedford that avoid the Bedford Market ?—No, I am not aware of any.

5173. On account of its being such a centre of disease ?—I know of none.

5174. Do you believe that there are any ?—No, I do not.

5175. Do you know any dealers who would avoid that market because it was a centre of disease, or was believed to be a centre of disease ?—No.

5176. Are you aware that pigs are sold by Bedfordshire dealers in other counties at prices which are stated in those counties to be about half their value ? —Not that I am aware of. I have no knowledge of that.

5177. Do you not know whether it is a fact ; have you no reason to think the Bedfordshire dealers trade in pigs which they sell at about half their value ?—Not to my knowledge.

5178. It has been so stated in evidence ?—I give them credit for the opposite.

5179. Would you consider that every man who advertised pigs for sale was a dealer ?—Certainly I would ; he would constitute himself a dealer, especially if the advertisement was repeated more than once.

5180. How would you propose to define a dealer ? —A person who gets his living by dealing in pigs either wholly or partially.

5181. A farmer might be partially getting a living by them ?—Then he would constitute himself a dealer if he kept changing pigs, buying fresh ones, and selling.

5182. I take it that a dealer according to you would be a very wide designation, a very wide term indeed ? —Yes. Any person who would be selling pigs daily or weekly would be a pig dealer.

5183. Say a cottager buys a store pig and fattens it, is he a dealer ?—No, not at all.

5184. I would like to know where an ordinary pig owner or pig feeder ends, and were a dealer begins ? —Where a person buys pigs for fatting purposes alone or for breeding.

5185. Then it would not be very easy to distinguish between one who was a dealer and one who was not a dealer ?—There might be some difficulty, but I think it could be easily got over, as it was betwixt a horse dealer and a person selling horses.

5186. There is one more question which I was not quite certain about ; did I understand you to say that the county admitted pigs out of the borough by rail ? —They pass through by rail.

5187. But the county authority did not admit them into the county ?—No, certainly not so far as I am aware.

5188. (*Chairman.*) Do any pigs come into Bedford from Peterborough ?—I believe so.

5189. Peterborough is a very large market, is it not ? —Yes, and so is Cambridge.

5190. There are a great number of separate jurisdictions in the neighbourhood, are there not ?—Each county has its separate jurisdiction.

5191. There are a great number of small counties just there, are there not ?—They are comparatively small.

5192. How far is it from Bedford to Peterborough ? —About 30 odd miles.

5193. The town of Bedford is one jurisdiction, is it not ?—Yes, certainly.

5194. And the county is another ?—Yes.

5195. The town of Peterborough is another separate jurisdiction ?—Yes, *it is* in another county.

5196. And the adjoining county of Hertford is another jurisdiction ?—Yes.

5197. Then there is the county of Rutland, which has a separate jurisdiction ?—Yes.

5198. The county of Northampton also has a separate jurisdiction close to that ?—Yes.

5199. The county of Huntingdon also has a separate jurisdiction ?—Yes.

5200. Then there is Holland, which is part of Lincolnshire ?—Yes, it has its own separate jurisdiction, I believe.

5201. I am only trying to bring out that just in that neighbourhood there is probably a greater number of small jurisdictions within a comparatively limited area than in any other part of England ?—I could not speak positively because I have not taken the trouble to ascertain.

5202. But you would admit that within a very comparatively limited area there is an enormous number of small county and borough jurisdictions ?—Yes.

5203. And that therefore the multiplicity of rules and regulations, and the difficulty of working them is greater there probably than in most places ?—I do not know ; I cannot say. They have separate jurisdictions, and they have their servants beneath them, the police in the first place and then the magistrates' clerks.

5204. But you are of opinion that the difficulty of dealing with swine fever practically arises, you have told us so, from the multiplicity of rules and regulations in the different areas ; your evidence points to that, does it not ?—I do not know that I have given evidence directly to that effect.

5205. Will you tell us what your opinion is ?—Would you kindly put the question again ?

5206. The question I want to ask you is this ; whether you do not think that diversity of regulations is one of the principal difficulties in the way of stamping out swine fever ?—Certainly.

5207. Therefore in proportion as the number of separate jurisdictions is great the difficulty becomes greater?—Certainly, when they work as I say at loggerheads one against the other.

5208. Therefore, if in your part of England there is this great number of county and borough jurisdictions close to one another, on your own showing the difficulties must be greater still?—Yes, because they will not work in unison.

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[The Witness withdrew.

[Adjourned for a short time.]

Major PATRICK GEORGE CRAIGIE, called; and Examined.

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5209. (*Chairman.*) You are Director of the Statistical Department of the Board of Agriculture, I think?—I am.

5210. You are aware that the subject of this inquiry is the question of the diseases of swine?—I am.

5211. It is naturally of importance to us in connection with this inquiry to have a clear view of the extent of the business of those who are interested in the keeping of swine. That entails a knowledge of the number of pigs in England, and we would be glad if you would place before us from your official experience the most material figures in regard to the number of pigs in the United Kingdom, and the fluctuations in the numbers in recent years?—I have prepared for the use of the Committee, if they should desire it, a statement of the number of pigs in the United Kingdom, and in each division of the United Kingdom, and in each county of Great Britain, from the years 1886 to 1892, inclusive. But perhaps the Committee would desire that some reference should be made to a still longer period.

5212. I should think if you gave us the numbers from 1886 first of all, we should then see whether that would be sufficient for our purpose?—The numbers in 1886, curiously, started from almost the point to which they have now returned. The total number of pigs returned in England in 1886 was 1,883,000. I give rough round figures, the table gives the accurate details. The present number of pigs in England is 1,829,000. In the interval there have been very great fluctuations. The numbers rose steadily in 1887, in 1888, in 1889, and more particularly in 1890, when the largest increase of recent years took place. Then in 1891 there was another increase, though not so great. The feature of the past year, 1892, was the very enormous decrease, which swept away the whole of the increase of the previous years, so that—and I am speaking now for England only—the figures have returned very nearly to, in fact somewhat below, the point from which they started in 1886. Taking the figures for the United Kingdom as a whole, the numbers now are decidedly below the numbers in 1886. We had then in the United Kingdom, in round numbers, three million and a half of pigs, and we have now, in round numbers, three million and a quarter in the United Kingdom.

5213. What reasons do you assign for this diminution?—The reasons influencing the number of pigs for any given year are very complex, and no doubt more largely connected with the questions of price prevailing at different times than with any other factors, although there are numerous factors of varying local import, and the changes in certain counties and certain districts have been very remarkable. Of course the Committee are aware that the number of pigs in particular districts varies enormously. For instance, we have more pigs in the county of Suffolk than in all Scotland; at least, it would so appear according to the returns. Then, again, the number of pigs in Ireland is very large, but the fluctuations in Ireland have not always apparently followed the course that the fluctuations in Great Britain have. The largest number in each case, in almost all counties, and in all divisions, was in the year 1890. In that year the prices began to recede very much, and I think that a discouragement of breeding has largely taken place from the low prices that prevailed, particularly at the end of 1891, when the prices were very low indeed. Apart from the figures that I put before the Committee, in many conferences with men engaged in pig farming I have been told that the discontinuance of breeding was the factor which most largely influenced the figures last year; that it was not the number of deaths or the quantity of disease, but simply the deliberate discontinuance of breeding in a trade which did not appear at the time to be profitable. But, as the Committee would see if they looked further back, the fluctuations have been at all times very great, and are very difficult at times to explain. The number that we have now in Great Britain is more than we had in 1879, more than we had in 1880, more than we had in 1881. I have not been able to trace any direct relation between the subject before the Committee, the number of cases reported of swine-fever outbreaks, and the number attacked, and the number of pigs in the country. There seems to be no arithmetical relation. Of course the losses are so very small in proportion to the numbers that I have been speaking of, that it does not really affect the totals. I thought it might be of use to the Committee to see where the changes take place, the remarkable changes of past years, and I have taken out the percentages for each individual county of the decrease in the pigs. Perhaps it might be convenient to mention some of those.

5214. If you please, will you now do so?—I am not quite certain what evidence the Committee have had of the proportions of disease in the particular counties, but I find that the greatest decline in England seems to have taken place in Cumberland and in Westmorland, and in those two counties there is no disease reported in the last two years. The percentage of decrease in Cumberland was 38 in 1892 as against 1891; the percentage in Westmorland was 44 in 1892 as against 1891. In some other counties there have been large percentages, and the average decrease for England is under the 25 per cent. The percentage is a little more in Wales, and a little more in Scotland. The county that shows the smallest decrease last year is the county of Suffolk, where the decline was only 11 per cent. That county is specially important, because, as I said before, it is the premier county in the way of pigs.

5215. (*Mr. Carrington Smith.*) Have you referred to Sussex?—No. The number of pigs in Sussex is only 37,000, and the number of pigs in Suffolk is 131,000. The next greatest pig county after Suffolk would be Somerset, where we have now 106,000 pigs, there being in that county in the previous year as many as 144,000. So that the decline in Somerset is 26 per cent., and the decline in Suffolk only 11 per cent. They are the two largest pig-breeding counties. I will hand in these tables, together with a table showing the annual number of pigs in each county from 1886 (*handing in tables*).

5216. Have you prepared statistics which will show the number of outbreaks and the number of animals attacked?—Yes; I have taken them from the records in my Department in each of the years from 1886 to the present time. I have also a separate paper showing the number of outbreaks and the number of swine attacked in each year since swine fever was distin-

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guished, that is from 1879, and I will put that in also (*handing in further tables*).

5217. It would be very important if you could give us some view of the total loss which has its origin in the disease?—Figures showing the total loss from animals slaughtered have appeared in the Reports of the Veterinary Department of the Board, and I have taken from those a statement showing the numbers in each year. The number last year is much smaller than in the previous years. The total number attacked in last year, 1892, was 13,957, of which 7,124 were killed, 5,789 died, 1,146 recovered, and 238 were remaining. But in addition to that there were 5,461 pigs which were healthy, and slaughtered in consequence of having been in contact. In previous years the numbers of animals attacked ranged as high as 32,000, 29,000, and even in one year, 1887, 41,000. Further back they were much smaller again. In 1881 the number attacked was 8,000. The number of healthy pigs slaughtered in any given year has varied from 1,700 to between 13,000 and 14,000.

5218. Have you made any calculation of what that represents in money value; are there any figures that are worth bringing forward in regard to that matter?—I have made certain calculations. I cannot quote them from any official Return, but I have myself, using the figures of the official Returns, ventured on making certain calculations as to the annual produce represented by the pig stock of the country. In the same way one could estimate what was the abstraction from that total by the number cut off in consequence of disease so far as returned. The figures, of course, are only estimates, but it might be convenient to the Committee to state that a recent calculation, which was on a basis suggested by Sir Henry Thompson in 1871, shows that the annual home production of pig-meat represented in tons has varied, during the last 20 years, from a little under 200,000 tons to as much as 300,000 tons, speaking in round figures. That is a result of a percentage taken upon a number of pigs enumerated every year in June. Taking 116 per cent. of the total number enumerated, and reckoning the average weight of each pig slaughtered in the year at 134 lbs., that is the mode in which that calculation is reached. I explain that because it is a mere calculation; but for comparative purposes it may be very interesting. It shows that the amount of consumption of the home pig produce has varied considerably between one year and another. I have certain figures on that point, and if they are of any use to the Committee I might mention them.

5219. Yes, will you kindly do so?—They will enable a contrast to be made between the home produce and the amount that has been slaughtered in the year. That is the only way that I could suggest by which you could measure the losses. Assuming that 227,000 tons of pig meat of all forms was produced from the number of pigs which we have enumerated last year, the result of those slaughtered for disease, and dying on account of disease, and those slaughtered as healthy, which we might put at about 20,000 altogether, would only represent about 1,400 tons out of 227,000. Assuming that that was the proportion, the value depends upon the price at which you take the pig meat in each case. The calculations that have been made of the value of pig meat vary enormously. I saw a calculation the other day by Mr. R. E. Turnbull, of Mansell and Company, in which he puts it at nearly 60*l.* a ton, or 60*s.* a hundredweight, for pig meat generally. If you take it at 40*s.* a cwt., of course a very large difference would be the resultant figure. I have myself looked at the values of our imports as marked in the Agricultural Returns, and I find that the price of bacon, which is the leading import, varies from about 2*l.* 13*s.* 6*d.* per hundredweight to 34*s.* 4*d.* per hundredweight, so that it is very difficult to get a close estimate in calculating the loss. But you might arrive at it by taking 50*l.* per ton, and applying that to the 1,400 tons that I have spoken of, this gives you a sort of figure which might possibly measure the loss. Supposing the total output of the pig stock of the year were 227,000 tons, that at 50*l.* a ton would represent something over 11,000,000*l.* a year, whereas the loss on 1,400 tons at the same price would represent about 70,000*l.*, so that about 70,000*l.* would be the calculation of loss. But, then, in many years you have had a great many more animals destroyed by the disease and slaughtered than you have had in the past year. I think, if the Committee care to go into the matter, the yearly loss might be worked out on the basis of pig-meat as an agricultural product.

5220. Could you give us some information in regard to the proportion of home production to foreign import?—Of pig produce alone.

5221. Yes?—I have made some calculations on that subject, again on the same formula that I spoke of with regard to pigs. I find that in no form of animal food is so large a proportion of its consumption brought from abroad as pig meat. I have now figures going back for 25 years, and I find that the total consumption of pig meat in this country has been estimated to vary from about 19 lbs. per head of the population to nearly 34 lbs. per head of the population. The home production has varied from about 13 lbs. per head to 18 lbs., while the foreign has filled up the difference. Practically, about half of the whole of the pig meat consumed in this country, rather more than half in the last year, is of foreign origin. That is largely bacon, and comes mainly from America. The figures actually represented as a total I have with me here. The total estimate of home produce, as I said before, for the year 1892, is calculated at 227,000 tons, and the import represents more than that, the total consumption being 502,000 tons, so that the foreign meat is 55 per cent. and the home 45 per cent. in the case of pig meat. That is a totally different percentage, I need hardly point out, to that which obtains in the case of any other form of animal food, and of course represents a very large addition to the total supplies. The total supplies of the home produce of all kinds of meat has been estimated at 1,400,000 tons. Of that, pig meat is only 16 per cent., while mutton forms 30 per cent., and beef about 54 per cent., of the home supply. So that it would appear that in this country, as distinct from many other countries, the proportion of pig meat produced in the year is much smaller than the proportion relatively of either beef and veal, or mutton and lamb.

5222. Is it your opinion that if swine fever could be stamped out there would be a considerable development of the industry of the country?—I think disease must be one of the factors which weigh with breeders in deterring them very often from going into the trade, on account of the risks and restrictions which are necessarily imposed. The whole question of whether it could be profitably developed depends on the question of price; I mean, that factor overweighs all other considerations when you have prices ranging from 35*s.* per cwt. to over 70*s.*, for the fluctuation and speculation are so great in the trade that that must always be considered the greatest factor, though of course the elimination of the risk of disease, and the removal of restrictions, would tend to enable the trade, other conditions being equal, to develop. Obviously, the figures that I have quoted show that there is great room for development if it could be profitably undertaken. It ought to be borne in mind that the figures as regards the head-rate consumption of pig meat fluctuate very much with regard to the position of any particular year. In certain years it is very cheap and very plentiful, and the supplies from abroad are very large; a larger consumption takes place then than in other years, and there would appear to be a greater fluctuation therefore than in the case of either beef or mutton.

5223. The high prices began recently, as I believe, to stimulate an enormous import into this country of a speculative kind; is not that so?—I think that is so. The highest prices were obtained in the year 1876. Taking the figures of the Import Returns and dividing by the quantities I find that bacon in that year was 53*s.* 6*d.*, whereas the lowest price was in 1879, when the price went down to 34*s.* 4*d.*, and in 1890 the price was 36*s.* 10*d.* This was the year I spoke of in answer to a previous question of your Lordship, as being that when we had the maximum number of pigs in this country and a large import besides. Certainly the years when the foreign imports have been very large have been provoked, as has been suggested, by previous high prices, and followed by very low prices.

5224. What is the condition now of the trade with Ireland; is it an increasing or a decreasing trade?—The trade in pigs imported from Ireland is comparatively steady. I have the figures with me, which show that previous to 1870 the average importation of pigs into Great Britain from Ireland was 356,000. It had risen in 1871 to 528,000, but after that rise there was again a decline in 1873 and 1874 to 344,000. From 1875 onwards the figures have not fluctuated much. They have run from 463,000 in the earlier year to 603,000 in the year 1890—again the year 1890. This was the year of the largest importation from Ireland, and the largest production of pigs here—concurrently, in the same year. The Irish figures do not show any great expansion. They declined 100,000 in the year 1891 from 1890. The figures in 1892 I have not yet fully made up, but I have had an estimate made of 508,000, which is about the average of recent years; it is quite the average of the last five years. With one exception, the year 1890, there is no recent exceptional year in the Irish trade.

5225. (*Mr. Stephenson.*) I should like to ask you a few questions as to the pig population of this country. Are the colliers' pigs, the single pigs kept in the gardens of the colliers, enumerated in the returns that you gave us?—On what areas?

5226. Say in Northumberland?—Do you mean in the town areas.

5227. No, in the county areas?—The agricultural returns here, until the present year, have been collected from every occupier holding more than a quarter of an acre of land; in Ireland I think they are collected from every occupier.

5228. Under those circumstances I am perfectly certain that in Northumberland alone you miss out many thousands of pigs. Would that be your opinion?—I should expect to find it so, certainly. I should expect that there is a considerable addition to be made to the total number of pigs in the country in respect of pigs not enumerated; but I would not apply that to Ireland, I think.

5229. Would that apply to the West Riding of Yorkshire?—The same rule would apply to all British counties.

5230. To all counties where there are large collieries with thousands of workmen, workmen probably keeping one, or two, or three pigs?—Unless the fact of the possession of these pigs was brought to the knowledge of the collecting officer it would be so. There is a statement in the returns which we have now which gives the numbers of persons having animals but occupying no land. I can tell you how many cases there were last year. Where the officer collecting the returns knows that animals are kept by a person not occupying land, he is bound to obtain the number of those animals, but of course there might be cases where he has no knowledge of the fact, and where the man does not appear in the rate-book as an occupier of any land. I have no official evidence of the fact, but in pointing out that the limit has been a quarter of an acre in all those years up to the present time, the presumption is that a certain number of pigs must escape enumeration below that level. Of course it would be impossible for the revenue officer to pay domiciliary visits to every house in the district, and ascertain the fact whether a pig existed there or not. I have here the statement for the past year, in which we made a slight alteration in the issue of schedules. Now we only receive a return from persons who have over an acre of land. A note is, however, made by the officer of men under that level who have animals. I find that there were persons who did not occupy land at all, but possessed as many as 16,500 pigs last year. These were enumerated outside the ordinary return and brought into my totals which I have been reading; and there were also persons who occupy an acre of land or less than that amount and no less than 21,177 pigs were found in their possession. So a certain portion of the missing pigs are accounted for.

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5231. Would you suggest any alteration so as to get hold of all these pigs belonging to the small men?—I am afraid that that would be a matter which we should require to go to the Treasury upon, because it would involve an enormous expenditure.

5232. It is very important that your figures should be correct?—Of course, speaking as a statistician, I am always desirous of obtaining the most exhaustive figures we can, but there are questions of administration, and it must be a question whether it is worth the very large cost, and whether the time of the officers of the Inland Revenue could be employed to go from house to house and discover the total number of pigs existing. I am afraid there is no existing machinery which would suffice.

5233. It is evidently a very large question, because not only do you miss the number of pigs, but you miss the quantity of pig meat that is consumed?—Undoubtedly.

5234. These colliers kill one, or two, or three pigs per year for their own consumption, and you miss all that; you miss the pig to begin with, and then the pig meat, do you not?—Yes, in respect of unenumerated animals.

5235. Are not your calculations, therefore, based upon your statistics, misleading?—I think not. I think that when we take the total number of pigs held by persons farming an acre of land at over 2,100,000, out of the total of 2,138,000 in Great Britain, that we account for a very large proportion of the pig population. I do not, of course, know how many colliers own pigs; we have no record which could show that, but I think we now certainly account for by far the largest proportion, and for all comparative purposes such figures as I have given just now must be of complete value, because they would show the difference between one period and another. There has been no difference in the system.

5236. What I have said about Northumberland applies to all counties where collieries exist?—Yes. There is the risk that there are persons not enumerated who own pigs.

5237. (*Mr. Carrington Smith.*) As a matter of fact, however deficient the returns may be, they would hold good for the purposes of comparison between one year and another?—Certainly. In order to get over the difficulty I explained about altering the returns this year to a different level, we have had special investigation of animals on an acre of land and less, so as to prevent any error in the return.

5238. Do you find any decrease in the number of pigs presently attributable to the prevalence of disease in localities?—The question of the prevalence of disease and the restrictions imposed in consequence of disease have certainly been mentioned on several occasions by some of the collectors, but, as the figures that I have just put before the Committee tend to show, the number of outbreaks in any county do not

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bear any relation to the diminution in the swine population of that particular county.

5239. You expressly stated that in Westmorland and Cumberland, where there has been no disease, the decrease has been greatest?—The decrease has been greatest in those two counties where there has been no disease, and therefore I cannot trace any statistical relation between the two. But I am bound to mention the fact that some collectors of Inland Revenue elsewhere, in accounting for the decline last year, did mention the prevalence of swine fever and the restrictions—not only the restrictions for swine fever, but certain other restrictions recently imposed under the Local Government Acts—on the keeping of swine in urban districts and in the neighbourhood of urban districts.

5240. Do you find that the sanitary authorities have, by their regulations, decreased the number of pigs kept, especially in urban districts?—That is what I was pointing to in my answer to your former question.

5241. It has been suggested by some of the previous witnesses that some registration or licensing of premises by men keeping pigs would be desirable for the sake of the health of the pig as well as for the sake of the health of the human being living in its neighbourhood. Do you think it would be possible?—Do you mean something like the Dairy and Milkshops Order?

5242. Yes?—I do not think that is a question which I could very well express an opinion upon. It does not quite fall within the sphere of my department.

5243. Have you any knowledge of how the inspection of cowsheds has worked?—No; it does not fall within my department.

5244. (*Mr. Wardlaw Ramsay.*) Do you consider that the present unusual high price of pigs is due to scarcity owing to the discontinuance of breeding?—I certainly think that is so.

5245. Do you think it is entirely attributable to that?—It is difficult to say that it is entirely due to that, but in the greatest measure I think it is due to that.

5246. (*Sir Jacob Wilson.*) What is your estimate of the total food supply of the country, taking it per head of the population?—Speaking from memory, 125 lbs. per head is the estimate. That is merely an estimate, and therefore only approximate of the entire amount of animal food—butchers' meat in every form, beef, veal, lamb, mutton, and pig meat in all its forms—whereof the figures as to pig meat that I have been putting before the Committee represent from 28 lbs. to 34 lbs.

5247. Do your figures show a considerable increase in the consumptive power of the country per head during the last 20 years?—Yes, distinctly.

5248. Can you give the Committee any estimate of the amount of increase?—I have not the figures at this moment with me here, but I can pretty well remember them. The increase has been something like from 106 lbs. per head in the aggregate to 125 lbs. per head during the last 20 years, making the calculation in the same approximate way at the two dates.

5249. (*Chairman.*) When your enumerators are making these statistics, what precautions do you take to prevent the same pig being possibly counted twice over by being moved? You cannot take a pig census as you do a census of the inhabitants where you enumerate the whole country on the same day, can you?—Yes, they are all taken on the same day. Every occupier of land enters his pigs on a separate schedule.

5250. On the same day?—On the same day, the 4th of June is the date. In the year 1891 we had 578,000 of those separate schedules returned, and they all represent, or are assumed to represent, the pig stock held on that day, the 4th of June. They do not all come in within a week or two of the same time, because of the inevitable delays, but they are all dated the 4th of June, and represent the number of animals on the farm or on the holding on the 4th of June.

5251. Then you are able to feel sure that a pig which might have been moved by the breeder of a pig, was not counted there, and then perhaps counted in a market?—It is not likely, as the rule is clear, but there is always a possibility that there may be a few instances of duplication in those many millions of animals. On the other hand, there is an equal risk of some animals being omitted altogether from the enumeration. There is always some risk, but taking so many units as 578,000 the balance of error on the one side and on the other will, speaking statistically, work itself out—it is so insignificant.

5252. In a county like Wiltshire, where there is an enormous number of pigs kept by cottagers, are you able to get an accurate return from each of them?—The county of Wiltshire appears to contain about 63,000 pigs. In the previous year it contained as many as 79,000 pigs. That I should think, subject to the explanations already given, would be a pretty full return from that county.

5253. In Wiltshire, as you no doubt know, there are an enormous number of pigs kept by very small people, by allotment holders. I think Wiltshire in fact is at the head of the list of English counties in regard to the allotments. There is an old saying that the pig pays the rent, and every allotment holder has a pig. Are you able, as a rule, to get at all those, do you think?—I do not think that I could feel any confidence that we get all the pigs that are kept on the allotments, for the same reason that I gave in my answer to Mr. Stephenson, that below a certain limit the returns are not collected by schedule; they are only collected by the officers obtaining the enumeration where they know of the existence of the pigs. The schedule is not delivered to anyone now holding less than an acre of land.

5254. I believe you have made out a table showing the number of foreign pigs infected with swine fever which have been imported into the United Kingdom?—Yes, I have prepared this table showing that (*handing in Table*).

[The Witness withdrew.

Mr. CLEMENT STEPHENSON, a Member of the Committee; Examined.

Mr. Clement Stephenson.

5255. (*Chairman.*) You have, I believe, been veterinary inspector for the city of Newcastle-on-Tyne since 1865, and chief veterinary inspector for the county of Northumberland since 1878?—I have.

5256. Will you inform the Committee what the course of action of these authorities has been in regard to swine fever?—They have worked in unison with each other. By that I mean that any orders prohibiting the movement of swine from places where disease was known to exist, have been alike in both.

5257. There are within the county of Northumberland some towns with a separate jurisdiction in regard to swine fever, are there not?—Yes.

5258. What are they?—Tynemouth.

5259. There is Berwick-on-Tweed close by?—Yes, that is at the extreme north of the county.

5260. Of course Berwick is quite an independent jurisdiction?—Yes.

5261. Then, in regard to slaughter and compensation, what has been the course?—It has been our

custom to slaughter the diseased pigs, and all in-contact pigs, and to pay for them the compensation that we were allowed by law.

5262. (*Mr Carrington Smith.*) How long ago?—Since 1882.

5263. (*Chairman.*) Now, in regard to restrictions on movement, are there any counties which you have got out prohibition orders against?—There are always certain places that we prevent movement from. At the meetings of the executive of the county we have the "Gazette" before us, and from time to time our schedule list is altered according to the "Gazette" account of counties where the disease is known to exist.

5264. What is the case now?—That is a copy of our Order (*handing in Order*). The county will make an order like that, and then in the course of a day or two the city meets and makes a similar order. We could not possibly work at all unless the city and and the county worked in unison with each other.

5265. Is this a copy of the existing order?—Yes.

5266. (*Sir Jacob Wilson.*) What is the date?—21st November, 1892. You will observe that we not only schedule the counties where disease exists, but also all boroughs and burghs situated in them, or immediately adjoining any of such counties.

5267. You have a schedule now that includes Bedford, Buckingham, Cambridge, Chester, Derby, Devon, Dorset, Essex, Gloucester, Hants, Hertford, Kent, Lancaster, Leicester, Lincoln, parts of Holland, parts of Lindsey, London, Monmouth, Norfolk, Northampton, Salop, Somerset, Stafford, Suffolk, Surrey, Sussex (Eastern Division), Warwick, Wilts, Worcester, York (East Riding), York (North Riding), York (West Riding), Midlothian, and every city, borough, or burgh locally situated in or adjoining those counties.—Yes.

5268. How many outbreaks have there been in your county in recent years?—I have had 60 outbreaks since 1882. We had most disease in 1890. We have slaughtered 280 diseased pigs and 233 in-contact pigs. Over and above those 233 in-contact pigs that we have slaughtered and paid for, a great many in-contact pigs are slaughtered by their owners without being paid for by the county or being accounted for in this table. There are 134 animals which have died with the disease. We have dealt with 647 animals altogether implicated in swine fever, and we have paid a total compensation of 605*l.* 10*s.* (*handing in Table*).

5269. You have had acquaintance with swine fever as a disease for a very considerable period?—Since 1882.

5270. Now, are there any observations based on your experience in regard to the history of any outbreaks within your county or in others with which you have had acquaintance that you would like to place before the Committee?—I have taken a great deal of pains in striving to trace the outbreaks, and from my note-books I have just taken a few short notes which I will read to you. In November, 1882, at Cornhill, I had a very extensive outbreak due to pigs brought from Edinburgh. On November 29th, 1886, I had an extensive outbreak of the disease at a place called Embleton, 11 died, 38 were slaughtered diseased, 21 healthy were salvaged. This outbreak was due to pigs 14 in number that were bought at Belford from a dealer on the 8th November. In February, 1887, at Sleekburn, I had an outbreak due to Scotch pigs bought in Newcastle market. In August and September, 1887, at Low Walker, I had an outbreak caused by a pig bought in Newcastle Market on the 9th August. In September, 1887, at Wallsend, an outbreak was caused by pigs bought in Newcastle Market on 23rd August. In July, 1888, at Morpeth Asylum, the outbreak was caused by Scotch pigs bought in Newcastle Market. In June 1889 at Kenton, I had an outbreak caused by a sow that had visited the boar at the Newcastle Workhouse, where swine fever existed unknown. Other outbreaks followed from that Kenton outbreak, because the farmer had been selling young pigs before he knew he had disease. We had to follow them about, and get them bought up and slaughtered. At Dinnington, in January, 1890, I had a very extensive outbreak upon the premises of a dealer and breeder. Several other outbreaks were traced to this one. This man had been selling pigs, and sows had been coming to his boars, too. That gave us a great deal of work in following that out, and getting them all bought up and slaughtered. On March 13, 1891, at Seaton Delaval, an extensive outbreak was caused by the introduction of nine pigs bought in Newcastle Market on the 17th February. Several other outbreaks were traced to this one. This Seaton Delaval establishment was a large co-operative establishment, and they kept a great many pigs and sold them to the pitmen, and before the disease was recognised here it had been scattered all over the country for miles. We had to follow them, and have them bought up and slaughtered. In May, 1891, at Bebside I had a very extensive outbreak, due to the introduction of pigs bought in Morpeth Market. In February of the same year, at Waterloo, there were 14 pigs diseased, the disease being introduced by pigs from Aberdeen bought in Newcastle Market. These are a few of the origins that I have traced and am sure about.

5271. You have, I believe, some tabular statements prepared of the outbreaks which have taken place?—I have taken out from my same note-books for over six years what I have headed, "Variations in symptoms and *post-mortem* lesions."

5272. You have also a statistical table of supposed outbreaks, have you not?—I have a farther statistical table of supposed outbreaks. I find that over the same time I have investigated 68 supposed outbreaks of swine fever, so that there are more supposed outbreaks than real outbreaks. Then, as to the variations in symptoms and *post-mortem* lesions, I have copied a few notes straight out from my pocket-book. In 1886, at Embleton, 70 pigs, a typical outbreak, coughing, eyes closed and weeping, purging, much wasted, lame in hind legs, swollen about throat, all very shivery and trying to get under the straw, most of them picking and feeding a little, none discoloured in body, some discoloured in ears; exhumed three carcases, in one the bowel lesions were well marked, in the other two the lung lesions only. At Walker, in the same year, I made a *post-mortem* on two pigs that died; in one only the bowel lesions were present, in the other only the lung lesions. In 1887, at Sleekburn (12 in the lot), *post-mortem* on a large sow that had died; lung lesions, pericardium full of jelly effusion, no bowel lesions. Killed another pig as a test case; no mark on the skin of this one, temperature 104, bowel lesions well marked, lungs healthy. There were no eruptions or swellings on any of this lot. In 1887, at Low Walker (13 in the lot), disease in the mild form; made two *post-mortems*; in first the bowel lesions were well marked, lungs healthy; in second, bowels all right, lungs, heart and pericardium diseased. Wallsend, same year (seven in the lot), seven diseased, temperature in each 107, eruption all over the body epithelium coming off when handled. In 1890, a Dinnington, 76 pigs; the first seven pigs died after a short illness, they had fits; made two *post-mortems*; there were none of the usual signs of swine fever; three more ill, temperature 102, no cough, ears and bellies purple. *Post-mortem*: lungs congested, gastritis, bowels full of dark-coloured stuff, straw, coals, red ash, &c. In three days' time three more pigs died when swine fever lesions were well marked in all of them; so good were these specimens that they are now preserved in the Museum of the Medical School in Newcastle. This herd was fed largely upon refuse

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materials from a knacker's yard. At Pigdon, in the same year, 16 pigs implicated; in one large sow that died I found the large intestines full of clotted blood. In 1890, at Waterloo, *post-mortem* in first case only, diffused muco-enteritis and mesenteric glands enlarged; in next case both bowel and lung lesions were well marked. In both these cases there were dark brown-coloured blotches deep in the structure of the skin of the belly. In 1891, at Bebside, one of the pigs in this outbreak had a temperature of 110, and the bowel lesions were well marked in this case. In 1892, at Rock, there was cough, swollen throat; *post-mortem* showed diffused muco-enteritis with only small plugging near the ilio-cœcal valve, effusion into the peritoneal cavity and enlargement of the mesenteric glands. Those are all the notes that I have taken as to the county, but we have a very good inspector at Newcastle, Mr. Hedley. I wrote to him for any notes he had upon swine fever in the city. This is his own report:—1889, June 8th. Outbreak at Union Workhouse, 36 swine found affected, all slaughtered and buried, and seven found healthy, three swine had died and three been slaughtered by the owners, all diseased. In 1891, July 2, one pig died in a slaughter house at Byker Hill; the appearance of flesh was suspicious, entrails, &c., not seen, flesh destroyed; pigs, Scotch, bought of So-and-so—on the 29th June, Newcastle Market. The same year, July 7, that is exactly five days after, outbreak at a place near St. Peters; 13 swine; one died, other seven affected all buried; five found healthy. July 9th, two days after, one pig died in a slaughter-house on Arthur's Hill. Suspected for swine fever; flesh bad colour, kidneys dark and spotted, destroyed; Scotch pig bought of the same gentleman that was mentioned before on July 6th. July 11th, one pig died in a slaughter-house in Dispensary Lane; specimens of gut, kidney, &c., submitted to Mr. C. Stephenson; strongly suspected for swine fever. This pig was received with 11 others on the 5th July by Messrs. So-and-So—from Auchreddie, Aberdeen, and sold by them in the market on the 7th July. July 17th, one pig died in a slaughter-house, Dispensary-lane, certified to be swine fever by Mr. C. Stephenson. This was one of 75 that arrived from Huntley, Banffshire, on the 12th July; the others sold for slaughter in our market. On July 20th, 1891, the Newcastle authorities made regulations prohibiting swine being brought to Newcastle from the counties of Banff, Aberdeen, &c. On August 14th a carcase of pork brought from Gateshead, flesh bad, skin red, kidney dark and spotted; destroyed; suspected for swine fever. This pig and others arrived at Gateshead on the 9th from Huntley, Banffshire. We in Newcastle prohibited all these pigs from the North of Scotland coming to us. The steamer came along Newcastle Quay, discharged so much of her goods on to Newcastle Quay, she was then taken across the river to the Gateshead side, which is in Durham, she discharged her pigs there, and those intended for Newcastle were slaughtered there and brought back as carcases. In 1892, April 19th, two died in a slaughter-house in Orchard-street; were suspected for swine fever, *post-mortems* were made by Mr. C. Stephenson, who found no infectious disease. Then the last item he gives me is rather a curious one—1892, June 30th, one carcase of pork at a meat shed (that is a place where dead meat is sent to be sold in our market, the cattle market) affected with swine fever, had been brought from Dunston Lodge; case reported as suspected swine fever on the 29th April, and order for slaughter given on June 29th. That is in Durham County The case is reported to the Durham County authorities on the 29th April, but no order for slaughter is given till June 29th; and the following day, June 30th, our inspector, Mr. Hedley, seizes one of these carcases in our market. The pigs had been slaughtered on the Durham side of the river, and the carcases sent to our market. Mr. Hedley did not know there was any disease at Dunston at the time, but he found this carcase and then made enquiry. I have notes here of some suspected outbreaks of swine fever:—1882, Morpeth, 14 pigs died out of a lot of 25 acute muco-enteritis, due to salt given in food; food is bad, poor in quality, and stinking; three handsful of salt had been added to the food every morning; 14 died, 11 recovered. 1883, Killingworth, disease of the liver. 1885, Little Houghton, three pigs dead, one ill, two healthy; skin congested, large intestines full of clotted blood. At Widdrington, an old abcess in liver. That is in the same year. 1887, at Bolam, bowel impacted with dry bran. 1885, Jesmond, four pigs died after a few hours' illness, gastritis, stomachs distended with crushed oats. 1889, Dudley, worms in lungs, stomachs and intestines, tuberculosis of lungs. Higham Dykes, poisoned with hemlock. Earsdon, disease of liver and obstructed bowels. Backworth, endo-carditis. Wallsend, disease of liver; liver like cork; it floated in water. 1890, Bedlington, in one case worms, in another tuberculosis of the lungs. Gosforth, worms. Waterloo, poisoned by eating the refuse from a tripe preparer; the stomach and intestines full of hair; several pigs affected. Seaton Burn, hydro-thorax. Low Walker, two cases of endo-carditis. Seaton Delaval, worms in stomach and endo-carditis. Dinnington, disease of liver and tubercular lungs; lungs, diaphragm, liver and stomach adherent to each other. Biggs Main, endo-carditis. 1891, Cambois, chronic bronchitis. Camp Terrace, tuberculosis of lungs, liver and spleen. Gosforth, poisoned by eating wheat; three died. Ponteland, nettle rash. Hedgley, anthrax. These were a few suspected cases that I have been sent for as being swine fever, and these are the results from my notes.

5273. Have you any observations which you would like to put before us with regard to valuation?—Yes, I do not think that 4*l.* is sufficient to give for certain pigs. As pigs are worth 7*l.* to 8*l.*, or 9*l.* a piece, particularly now, when pigs are very dear, I think a higher scale of valuation should be allowed, at any rate for in-contact pigs.

5274. Are there any measures that you could suggest of a more effectual character than those now in use with regard to the sanitary part of this question, whether by way of prevention or of cure?—Yes. When we found in Newcastle that we were getting diseased pigs from Scotland shown in our market every Tuesday, I thought the matter over, and there was a meeting called of my authority in the city. We there and then commenced to disinfect the pig market at Newcastle. That was on the 15th July, 1891, and that is still carried out. We use 2½ gallons of carbolic acid per week in the pig market. We do not touch the sheep market, or the cattle market, but the portion where the pigs are shown is washed with a very strong force of water through a hose pipe, and the carbolic acid is mixed up in a large tub and applied by a watering can with a rose to it. Then farther than that, all the refuse of the pig market—I mean the straw and the fæces and the rubbish generally which is left—is carefully gathered as soon as the market is over, and is taken to the destructor, and burnt. In Newcastle we have a very large destructor, in which we destroy everything that can be destroyed. When we have an outbreak we burn all we possibly can of the sty; many of the sties are just cobbled up pieces of wood, very likely with wood flooring, wretched little places. We have never had any trouble in destroying the most of them. I would not say we take the roof, but the floor and so much of the side, and one thing particularly, the trough, and all the straw and bedding that has been about. If there is any manure heap that will burn, we put it all together and burn it, and then after that we depend upon unslaked lime principally.

5275. Is there anything that you have to suggest of a sanitary nature in regard to prevention before an outbreak takes place?—I have great faith in the power that we have in preventing pigs from diseased places coming to us.

5276. I was looking more to the special questions you have heard asked of other witnesses on this matter. We should like to know your view as to whether more stringent regulations could not be taken with a view of improving the sanitary conditions of these places?—I think that all markets and lairs where pigs are shown should be cemented and thoroughly cleansed after being used, and even disinfected, the same as we do, with carbolic acid, when disease is prevalent—certainly they should be disinfected. That is all that I can suggest. I might also say that the lairages near to the markets require as much looking after as the markets themselves. I attach very great importance to the form that we have adopted in our cessation order.

5277. Will you explain that point?—Neither the inspector, nor the chairman, nor two members of the sub-committee can free the place until I am satisfied. The inspector will write down that the place has been so long free from disease, and that it has been disinfected; he will get that signed by two of the sub-committee, or by the chairman of the executive, and then it must come to me, and if I have the slightest doubt, if I think it is a bad place to disinfect, I go and see the place myself again, and if I am not satisfied, I give certain orders what is to be done, and then when I am satisfied I countersign this paper, and then that goes to the executive committee, and the place is declared free, but it cannot be declared free until I have certified that it ought to be so. The paper has no effect until I have countersigned it. I attach a great deal of importance to that.

5278. Now, in regard to the general administration of the Acts, have you observed from your experience that the diversity of practice and the multiplicity of authorities is a serious obstacle to success?—That is *the* trouble.

5279. Are you in favour of the transfer of jurisdiction to the Board of Agriculture, or to some central authority?—I am. I think it is quite impossible to get uniformity. I should like to say this, that I believe we have power sufficient to get rid of the disease if every local authority would act upon the power they have—but that is impossible.

5280. (*Professor Brown.*) There is one point about the identification of disease I should like to be clear upon. Referring to the cases where you have met with lung lesions and other lesions, is it the case that you conclude that those lesions indicate swine fever because you find them in connection with animals which have swine fever of the common kind with the characteristic bowel lesions?—That is so.

5281. Then if you saw a single case with the lung lesions—only one pig, no others near it—would you still call that swine fever?—No. I always wait for the bowel lesions. But the lesions that I refer to in the lungs are special. I do not look upon them as ordinary broncho-pneumonia at all. Generally the anterior lobe of one of the lungs becomes hard and enlarged, and there is a peculiar yellow, jelly-like effusion, with adhesions.

5282. Have you found any cases where there is caseation of the lungs?—No, I have not.

5283. Do you know whether or not the small bacillus which is capable of producing swine fever lesions, and is probably the cause of the disease, is detected in the lungs in those cases?—I do not know that. I would like to add that one of the *post-mortem* symptoms that in my opinion is more uniformly present than any other is the enlargement of the mesenteric glands.

5284. Would you consider that a *post-mortem* appearance which could be suggested for the guidance of inspectors in general?—I would not. If I made a *post-mortem* and found the mesenteric glands enlarged, particularly if there was a little effusion in the abdominal cavity, and not the usual swine fever lesions, I should put the lot of pigs in quarantine until I saw them in a day or two or two or three days as the case might be. That is our practice. I often go to a case, and I cannot decide whether it is swine fever or not, and then I put them all in quarantine.

5285. You would not condemn them as swine fever cases without further evidence?—Certainly not. At that time I pointed out to the executive that it was so difficult to diagnose swine fever that I asked them to make an order giving me power to slaughter a pig as a test case. That was done, and for a long time, for years, I had power to kill any pig that I suspected. It was the cheapest thing to do. The pig could not be worth more than 30*s.* or 2*l.* Perhaps I was half a day in getting to the place, and if I had any suspicion about it at all, I bought and slaughtered the pig, and made a *post-mortem* there and then. Then an order was made here that took that power from us, and if you remember, my authority, the county authority, wrote, and a special authority was given me to slaughter pigs up to a certain time. About 12 months ago, I think, that lapsed.

5286. But that was on the condition that you arranged with the owner about the payment?—Yes, there was never any doubt about the payment, but now we have no power to do that at all; we have not the slightest power to kill as a test case.

5287. You have surely the power if your authority would authorise you to spend the money to buy the pig of the owner and kill it?—No, the auditor comes in and bothers us altogether. Under the magistrates we had perfect power, there was no trouble under the magistrates; the county council has caused all the trouble.

5288. The whole thing is simply a question of money. If you can get the money to buy the pig there is no law to prevent you killing it?—But the auditor will not pass the account.

5289. That means that you cannot get the money?—That is so, we used to pay for the pigs, and if a man gave notice to day, and his pig died to-morrow, we used to pay that man under the old regime because we said this man has done the best he could.

5290. You could not do that under any of the Contagious Diseases (Animals) Acts?—No, we did that under the authority of the old magistrates.

5291. (*Chairman.*) That was because the county had its own auditor in those days?—Yes.

5292. (*Professor Brown.*) Has your attention been called to the question of slaughter-house manure, you heard that point raised this morning?—Yes.

5293. Do you think that that is a tangible source of danger?—I think it is possible, but I have not known any of the mischief come from that.

5294. Of course, you know that slaughter-house refuse is used for top-dressing pastures?—Yes. You can see that I attach great importance to it when you recollect that I have had all the manure from the pigs taken to the destructor since 1891, every week it is taken to the destructor and burned.

5295. Have you any suggestion to offer for dealing with the matter generally, because, of course, there are many pigs affected with swine fever which are

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killed in slaughter-houses and nothing is known about them?—I have no suggestion to make there.

5296. You do not think it practicable in a general order to insist upon the disinfection of manure at the slaughter-houses all over the country?—No, I do not think it is necessary.

5297. I wanted to get your opinion upon that, because I have been seriously asked in the last two days to try and get an order to that effect?—I have never known disease carried by manure from slaughter-houses.

5298. It is not very likely that pigs would be put upon ground where the manure has been thrown over or heaped at the same time?—No.

5299. You suggest a higher scale for valuation for an in-contact pig?—Yes.

5300. Would you go as high as 10*l.*?—No, I think 8*l.* would be ample.

5301. And you would not increase the maximum for diseased pigs?—That is my idea. I would leave the present standard for diseased pigs, and give a higher standard for in-contact healthy pigs.

5302. That is to say, you think a maximum of 2*l.* is quite enough to pay for a pig which would almost certainly die, and which is worth nothing?—That is my opinion.

5303. Whereas if you kill a healthy pig you think you ought to pay something like the market value?—Quite so.

5304. (*Sir Jacob Wilson.*) May I ask whether you are influenced in arriving at that opinion by the recent increase in the price of pigs?—No, certainly not, it has been my opinion for a long time.

5305. You have had a very large experience over the north of England in all matters connected with the diseases of animals, and I assume that you have a knowledge of what takes place in many local authorities beyond Newcastle?—Yes, I have a general knowledge.

5306. Is it your opinion that the action of those local authorities is not equally, or sufficiently, strict?—It is not strict enough, and it is not uniform.

5307. Do you attribute much of the success that you have had in Northumberland in exterminating disease in case of sudden outbreaks to the uniform action between the borough of Newcastle and the county of Northumberland?—I do.

5308. I believe that in Newcastle there is a very important weekly market for stock?—We have a very large market.

5309. Have they special regulations for its control?—There are special regulations.

5310. Do the corporation take a special interest in the matters connected with the market?—They take a very great interest in it; there is a special committee which deals with it, the market committee, and there is also another special committee called the Cattle Diseases Committee, which is very much interested in the market.

5311. In any of the Improvement Acts, for the borough of Newcastle, have the corporation taken special powers to deal with matters connected with the Newcastle market or with diseases of animals in the city?—They have.

5312. Have any special powers been taken recently?—Quite recently. We got a new Improvement Act in 1892. It had been a very sore point with us for years, that we got a great many old tubercular cows sent to us out of Ayrshire, particularly after Glasgow ceased to take them. When Glasgow did not take them they were sent on to us, and we had some wretched old worn-out cows sent. We had no power to deal with those animals, and so we got two clauses put into our Town Improvement Act, upon which we now work. Seldom a week goes by that we do not order out compulsorily, animals which we think are tubercular, or which we are suspicious of as being tubercular, or which are old and worn out, and emaciated, and not fit for human food. We have great power in that respect.

5313. Do those clauses that you refer to apply to all animals inclusive of pigs?—Precisely so, and they also cover the cow market which is held on Saturday, we have two inspectors to see that it is carried out.

5314. With regard to Newcastle market, can you give us any statistics showing the number of pigs sold weekly?—I cannot give you a twelve months' statement.

5315. Can you give me statistics for one week during the present year?—I have taken this week's figures out; as I came up in the train I did so.

5316. The present week?—Yes, this week, on Tuesday.

5317. What was the total number of pigs on Tuesday last?—It was rather a small cattle market, 2,063, added to which there were 5,624 sheep and lambs, and 363 pigs. There is something very curious about this number of pigs, 363, because in the same report I find that there were 301 Scotch pigs from Aberdeen and Banffshire; then there were 229 pigs from Ireland, which makes 530; but the total number of pigs shown in the market on the Tuesday, was only 363. The number of local pigs I cannot tell you, but if I say 100 I think I should be within the mark.

5318. Now where was the balance of those pigs sold?—The balance of those pigs were sold on the Saturday, Sunday and Monday in the lairs near the town markets.

5319. Those lairs are within a reasonable distance of the markets are they not?—Yes, the great thing is to get a lair near to the market, and also near to the cattle docks.

5320. Is there a general supervision of those lairs similar to the market supervision?—Our inspector, Mr. Hedley, and his assistant always look after those lairs, and report upon them. Some of the lairs, that is the lairs that were built by the corporation, and which are attached to the market, are very good indeed, well cemented and kept very clean. There are other lairs on private properties which are not as they ought to be.

5321. Then under the special circumstances you have mentioned, where sales and purchases take place in the lairs as well as in the markets, ought those lairs in your opinion to be put under the same conditions of supervision as the markets?—I think that the lairage of the market requires as much looking after as the market itself so far as cleanliness and disinfection are concerned.

5322. Would you recommend that lairs should be licensed?—I cannot go that far yet; I do not think we should obtain any advantage if our lairage were licensed, because we have now full power to look after the lairs.

5323. I take it that there are no market tolls paid for pigs sold in the lairs?—That I cannot speak to. I should like to say this, that when unfortunately disease has appeared in the lairage, the owners of the lairs and the owners of the animals have acted in the most loyal manner and slaughtered right and left hundreds of animals within a day or two, at our suggestion.

5324. I gather that you carefully and regularly revise your schedule on receipt of the Gazette returns? —We do.

5325. In the examination of a witness the other day I gathered that whilst Northumberland had scheduled the county of Bedford, it had not scheduled the borough of Bedford. Can you explain whether it was so or not?—In our case the boroughs are all scheduled with the counties. As I pointed out in the advertisement which I have handed in, you will find that the boroughs and burghs locally situated are included.

5326. Is it your experience that there is much fraudulent concealment of disease?—There must be in some places, but I do not think there is in my district.

5327. You have pointed to Scotland and Ireland as being the chief sources of the pigs supplied to Newcastle market?—That is so.

5328. In the case of pigs from Scotland do they chiefly come by sea?—Yes.

5329. How long are they are on the way?—From 12 to 16 hours I think. They come from Aberdeen to Newcastle; they leave on Saturday afternoon, and they are in Newcastle on the Sunday forenoon.

5330. Have you any reason to believe that the sanitary condition of these pig-carrying ships is not satisfactory?—I have never had any reason to think so.

5331. In view of what has been done by the central authority in exterminating pleuro-pneumonia and foot-and-mouth disease, have you any doubt in your own mind of the possibility of exterminating swine fever?—I am quite sure that if it was in the hands of the central authority they could stamp it out.

5332. The outcome of your evidence would go to show, would it not, that in the case of an outbreak, you recommend compulsory slaughter, with compensation and judicious restriction on movement?—That is the most important thing of all, to begin with, restriction on movement.

5333. And improved sanitary precautions?—Yes.

5334. Is it your opinion that slaughter alone would not have that effect?—Slaughter alone would not have the desired effect.

5335. (*Mr. Carrington Smith.*) The Irish pigs that come into Newcastle are principally fat pigs, are they not?—Yes.

5336. Are the Scotch pigs store pigs?—No, they are nearly all fat. The difference between store and fat is only a question of degree. There are very many pigs sold in our markets which come to the market supposed to be fat, they are really fat enough for pork, but a gentlemen or a farmer comes and buys them and takes them home to give them two or three months' more food to make them still fatter, and therefore I do not see how you can draw the line.

5337. You have had some disease from Scotland in this sort of pigs?—Yes.

5338. But none from Ireland?—None from Ireland; we never had a case from Ireland.

5339. Did swine fever come to you from Denmark in former days?—Yes, there were pigs stopped at the quarantine for swine fever some years ago.

5340. What sort of paving have you in Newcastle market?—The sheep market and the pig markets are cemented, but the cattle markets are all paved with large granite blocks.

5341. With interstices between them?—Yes, and all parts of the market are very carefully washed; directly after the cattle go out they begin at once sweeping and washing.

5342. Do you consider that part for the cattle which is paved as good as that part for the sheep and the pigs?—Better. *Mr. Clement Stephenson.* 17 March 1893.

5343. That is the granite blocks with the interstices between?—Yes.

5344. Can you cleanse them as well as the others?—Yes, and they are safer.

5345. Because of the slipping, you mean?—Yes.

5346. Do you take all the manure from all parts of your cattle market?—No.

5347. Only from the pig part?—Only the manure from the pig market goes to the destructor, and all the refuse from the pig market also.

5348. But not that from the cattle and the sheep markets?—No.

5349. How many veterinary inspectors have you under you in your area?—I have none directly under me in the county.

5350. What powers have they independently of you?—They have powers to act if called in by the police, but if it becomes a case of slaughter, then I must go.

5351. Always?—Yes, I must take charge of it.

5352. In any case of doubt?—In any case of doubt I am called in.

5353. Do you perform all the *post-mortems* yourself?—Not all, but a large proportion of them. If I do not perform the *post-mortem* I arrange for the *post-mortem* to be made.

5354. It is dependent on your certificate then?—Yes.

5355. Always?—Yes. If an inspector down in the north has any doubt he sends me the *post-mortem* parts.

5356. Then you are the ultimate authority for diagnosis all over the borough and county?—Yes, I have been so for the city since 1865, cattle plague time, and for the county since 1879.

5357. You spoke of having burnt the wood-work of private premises in connection with the cleansing of the sties; at whose expense was that done?—At the expense of the owner.

5358. You also spoke of disinfecting the sty and disinfecting the markets, at whose expense again?—At the expense of the authority.

5359. In the case of the markets that would be the markets authority?—Yes.

5360. And in case of the sties the local authority. We find all the disinfectants and give a certain amount of assistance and help them in every way. We find them unslaked lime and sanitas. I have stopped using carbolic acid entirely as it was not a safe thing to use about sties and gardens.

5361. Then you take upon yourselves, as a local authority, the entire responsibility of disinfection and carry it out in the case of private premises?—That is so. The owner, the pitman or cottager, whoever he is, will assist as far as he possibly can, but we pay all expenses.

5362. He would find you the material on the premises and the bare labour, and you would pay for all the stuff that is bought?—We pay for everything. In the case of a farmer we pay for the cartage if he has to go five or six miles off for lime we pay for that and for the work of his man.

5363. Practically none of the cost of disinfection falls upon the owner of the pigs?—None at all.

5364. Since 1882 the expenses of slaughter have come to 605*l.* 10*s.*, I think I understood you to say?—That is the total.

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5365. For the eleven years ?—Yes.

5366. What have the expenses of working the Act been during the same time ?—I could not tell you that. We have paid for healthy pigs 422*l.* 6*s.* 6*d.*, and for diseased pigs 183*l.* 3*s.* 6*d.*, making a total of 605*l.* 10*s.* It is surprising how the pitmen begin to slaughter the moment I say swine fever is in the place. In Northumberland there are long rows of pitmens' houses, and every pitman has a small garden, and I think every pitman has one or two pigs, and some poultry, or perhaps pigeons. When I drive down there with a policeman and I examine a pig and make a *post-mortem*, and I say it is swine fever, and look round about I do not go to another pig near at hand, in fact I never go near another one until I have been disinfected, but I get a general idea, and say, draw the line here, and we will take all these pigs. The sub-committee is called the next day, I explain it to them, the order is made, the valuator goes down and buys the animals, the valuator sends the slaughtermen, and then the valuator takes the healthy carcases away and salvages them. But before the valuator can get down some of the pigs are slaughtered right and left, and up and down, and all round about this particular district if they are fat; the pitmen at once set to work and have them slaughtered.

5367. Voluntarily ?—Yes.

5368. And you are not charged with it ?—That is so, we know nothing about it and we have not to pay them. They know so well the danger of the disease, and if the pig is anything like fat he is made into bacon at once. That saves us a very great deal of money.

5369. I suppose the expense of working the Act would be very considerably greater than the sum which you have paid for compensation ?—No, the expense of working the Act is really very small to us, very small indeed. The heaviest item I believe will be our printing account, printing the regulations and all the bills that are placarded all over the county.

5370. Apparently it would be only 60*l.* a year, in the ten years for all your veterinary inspection ?—No, that amount does not cover the veterinary inspection.

5371. That is what I put to you, the total expenses of the working of the Act ?—The 60*l.* a year is what we have paid for dead pigs alone, that is the compensation.

5372. Now, I will ask you then as to the expense of working the Act, that is including the expense of the veterinary inspection, of the police inspection, and of the advertising, would that not be greater than 60*l.* a year ?—It would no doubt, my own fees would be more than that.

5373. Do you import many pigs in your market, except from Scotland and Ireland ?—A few locally.

5374. Not many from the English counties ?—No. Durham county is very often blocked by us. Although it is only just on the other side of the river, for months and months they cannot send a pig to us.

5375. Then I take it that you attribute a considerable proportion of your immunity from disease to the fact that you schedule these infected counties ?—I think there is no doubt about it.

5376. (*Mr. Wardlaw Ramsay.*) What is your opinion as to the advisableness of licensing dealers, as has been suggested to the Committee more than once ?—I do not think it is necessary, and I see a great deal of trouble in carrying it out. We used to have licences for horse dealers, and there is no licence for them now, and the thing works just as well.

5377. What about the licensing of the premises ?—I cannot see how that can be carried out, I do not know where you are going to draw the line.

5378. In the county of Northumberland what is your system of restriction on an outbreak of swine fever ?—On an outbreak of swine fever I instruct the inspector to summons the sub-committee for the following day. I attend that sub-committee wherever it may be held, at any part of the county, and I explain to them the nature of the outbreak, and I advise them as to the place that they shall declare an infected place, I advise them as to the boundary of the place, and they issue the orders that are to be carried out.

5379. The boundary varies, I suppose ?—Considerably.

5380. Within what margin, would you say ?—I had rather an interesting experience, I might tell you, in December last. I got notice of a pig having died at Gosforth. A gentleman had two small pigs. The gentleman that made the *post-mortem* was not very certain that it was swine fever. He brought it to me, and I was not certain that it was positively swine fever, but the very next day the other little pig was dead. I went out early in the morning and made a *post-mortem* there, and that was a typical case of swine fever. I said, "Where did you get these pigs from ?" "The Morpeth Asylum." The inspector was there, and I said, "Mr. Inspector, you go across to the station and send word down to Crosier, the superintendent at Morpeth, that he should go to the Morpeth Asylum and see what state the pigs are in there." When the superintendent went up there he met a veterinary surgeon coming down from the asylum to say that swine fever existed, they had heard of these two pigs dying, and had called in a local veterinary surgeon. I went up there. There were, I think, six pigs laid dead, but every pig about the place was diseased more or less. The end of it was that they killed and buried every pig, a large number and all pedigree pigs, Berkshires, and other fine bred pigs. The committee met, and it was suggested to the asylum authorities that they should pull down and burn the whole of their buildings, which was done. All their fences round their fields, and a very large wood building, was taken down into a plantation, and everything was burnt, the small piggeries in the fields where the boars lived, and certain sows, where they have pigs, were taken away. The next time I went there there was a perfect change. There were no pig buildings, and instead of green fields it was thickly covered with gas lime as a disinfectant. Then following that out we found that the asylum authorities had been selling a good many pigs, and that they had also had sows visiting their boar. We called a sub-committee meeting the next day, we sent notice to everyone who had bought a pig at the asylum for the last six or seven weeks, and to the owner of every sow which had visited there. We got them all at the meeting, and I advised the committee to take the whole lot up and to buy and kill everything. The owners then said the pigs were healthy, but examination showed that some were diseased.

5381. At many of the places where these pigs had gone to ?—Yes.

5382. Did you declare them infected places ?—Yes; and answering your question as to the size of an infected place, there was one man, a little farmer; who had a little bit of land, and who was a pig dealer; we found disease at his place; we made his farm buildings an infected place; there were fields all round about, and we just took his farm buildings like that (*describing*). Then about two miles farther down there was a place called New Winning in a colliery district where there were a great many pigs, and hundreds of houses. I took the

whole of those, there were two rows like two long streets, and drew a circle all round there and defined the boundary. One was a very small place, the other was a very large one, depending upon the number of the pigs and the circumstances. That will answer your question as to the size of our infected places.

5383. (*Sir W. Kaye.*) Newcastle does a large business with Ireland in pigs, does it not?—A very large business. I can give you the exact quantity.

5384. I was just going to ask whether you can give us any statistics?—When I was up here last week I wrote down to ascertain the exact number of pigs that came to us last year. I find that from the 1st January 1892 to the 31st December we had 8,800 Irish pigs sent into Newcastle Market.

5385. And the trade has been satisfactory in every way?—Yes, we have a very fine lot of pigs come to the market, and we have had no disease from there.

NINTH DAY.

Saturday, 18th March 1893.

At 7, Whitehall Place, S.W.

PRESENT :

THE LORD EDMOND FITZMAURICE IN THE CHAIR.

Sir WILLIAM S. B. KAYE, C.B., Q.C.
Sir JACOB WILSON,
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY,
Mr. JOSEPH SMITH, Jun.,
Mr. T. CARRINGTON SMITH,
Mr. CLEMENT STEPHENSON.

Mr. FRANCIS A. FULFORD, *Secretary.*

Major JOHN TRENCHARD TENNANT, called ; and Examined :

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5386. (*Chairman.*) You are the Chief Travelling Inspector of the Board of Agriculture, are you not ?—Yes.

5387. And you have filled that position now for some time ?—For the last 16 years.

5388. You have naturally, therefore, had very great experience of all diseases of animals, including those of swine ?—I may mention that I was appointed together with my colleagues for the purpose of dealing only with matters connected with the transit of animals, but taking considerable interest in the matter I gradually obtained some experience as regards the working of regulations that related to animals affected with disease, and by degrees my colleagues and myself have become employed in matters connected with the stamping out of disease amongst animals.

5389. Now will you tell us briefly, and having regard to the fact which I think you are aware of, that Professor Duguid has given us some historical evidence already, any material facts which you wish to bring before us in regard to the history of swine fever in the past ?—I should first like to draw the attention of the Committee to some figures as regards the number of swine that have been attacked in past years as compared with the amount paid in compensation. The first complete year for which figures were obtained as to the number of animals affected with the disease was in 1879. During the four years ending 1883 the number of animals reported as having been attacked was a little over 60,000. During those years the Local Authorities had power to slaughter, but no official figures were published of the amount paid in compensation. In the Board's annual reports the amounts paid in swine fever were included with the amounts paid in other diseases. In 1884, for the first time, the annual report showed the amount paid by Local Authorities in compensation for swine fever apart from other diseases. The total was not much—something under £6,000. Of course facts of this kind generally find their way into the agricultural papers, and it is possible that the knowledge that compensation was being paid may have encouraged owners to report more freely. However, it is a striking circumstance that in the following year there was an immense increase in the number of animals reported as affected with the disease.

5390. When you say the following year, do you mean 1885 ?—Yes. The number of animals attacked in 1884 was something under 9,000, and for the first time the amounts paid in compensation was published. The number attacked in 1885 amounted to nearly 39,000.

5391. Do you know how much was paid in compensation in that year ?—That first year I think I have mentioned the amount was something under £6,000.

5392. What was it in 1885 ?—In 1885 it was a little over £22,000. It will be noted that that is a very large increase in the amount of compensation, and if we follow that into 1886 we find that the number of attacks remain nearly the same. In 1886 they amount to 35,000, but in that year, 1886, the largest sum that has ever been given in compensation was paid, namely, nearly £29,000. Now the result was that in the following year, 1887, there were no less than 41,000 animals attacked, the largest number that has ever been reported yet. From that year the amount of compensation paid gradually decreased, and the number of animals attacked also gradually decreased—not as an absolute rule, but as a general rule, the decrease in the disease not preceding the decrease in the amount of compensation paid, but following it. I think that circumstance is a very striking circumstance.

5393. To sum up your opinion, to what do you attribute the decrease after 1887 ?—I should attribute the decrease generally as being due to the decreased sum paid in compensation.

5394. Was that owing to a general change of policy in all the counties ?—I think, myself, it is probably due to the fact that where owners found that they were not likely to get compensation, and, therefore, that they had no particular advantage in reporting, they discontinued reporting.

5395. What was the amount paid in 1887 ?—In 1887 the amount paid was nearly £22,000.

5396. Although the number of animals attacked in 1887 was greater than in 1886 the amount paid in 1887 was less than in 1886 ?—Considerably less.

5397. And that probably began to be realised over the country ?—Yes.

5398. Now do you think that that diminution in the payment was partly owing to a belief on the part of some of the County Authorities that they were paying sometimes under a mistake, and sometimes owing to the negligence of pig owners ?—I should

think the decrease of compensation arose from this; that local authorities found they were not gaining anything by spending large sums in compensation. Probably they did not attribute it to any particular cause, but they only saw the fact, and, therefore, they decreased the amount they paid in compensation.

5399. Have you any special observation to make in regard to the steps taken to check movement in the autumn of 1885, and the slaughter Order which was in force during the winter months of 1885-6?—During the autumn of 1885, for three months, there was a movement Order in force, and the Travelling Inspectors were engaged, in addition to the performance of their other duties, in observing and reporting on the methods adopted by the Local Authorities for carrying out these Orders, and on the whole the reports were fairly favourable. Some short time before these regulations for swine fever came into force other regulations had been in force for checking the progress of foot-and-mouth disease. The foot-and-mouth disease regulations for some considerable time were almost totally disregarded in some districts; very poorly carried out in most; but owing to the representations that were made by the Board, due to the reports received from the Travelling Inspectors, gradually an improvement took place. Consequently when the Swine Fever Movement Order came into force the Local Authorities were to a certain degree prepared for the execution of it, and on the whole it was I think very fairly carried out, although certainly in some of the boroughs there was considerable indifference, and illegal sales and irregular movement were by no means infrequent.

5400. I suppose that the compulsory Slaughter Order, which came into force 1st December 1885, is one of the reasons of that considerable rise in the sums paid for compensation in the years 1886 and 1887?—Yes; no doubt a considerable portion of the £29,000 that was paid in 1886 is to be accounted for by the fact that for two months during that year slaughter was compulsory both of diseased and healthy pigs.

5401. That was in December 1885, and January 1886?—Yes, and in February 1886.

5402. But still on the whole that compulsory Slaughter Order was carried out in a very perfunctory way, was it not?—A very perfunctory way—most irregularly. There was, generally speaking, a great difference of opinion as to what constituted contact. Some of the Local Authorities took a fairly broad view of the matter, and did slaughter with some freedom; other Local Authorities simply slaughtered the pigs that were in the same sty; they took no means whatever for preventing the disease from spreading to other sties that might be close to them, and generally it may be said that the action was so slow that it was of very little value. Sometimes a Local Authority did not meet say for a week after the disease had been reported to them, and, therefore, no order was made for slaughter. Then when the Order was given as to slaughter it frequently happened that several days were allowed to elapse before the animals were slaughtered. As to the disinfection that followed the slaughter, it was generally performed in a very imperfect manner. The sties were not thoroughly cleansed, and I do not know of any case where the Local Authorities took steps to cause the persons that had come in contact with the disease to disinfect their clothes, nor were things other than the actual sty and the manure disinfected. It seems very probable that in many cases the attendants, and possibly also in some cases the veterinary inspectors themselves, carried the disease about with them.

5403. That compulsory Slaughter Order only lasted a very short time, and in March 1886 you got back again to the old state of things, permissive slaughter?—Yes.

5404. And that has continued ever since?—That has continued ever since. No combined attempt has been made since then to deal with the disease.

5405. I gather from what you have told us that you look upon the variety of policy and the number of jurisdictions and areas as being the root of the difficulty in stamping out this disease?—It has been no doubt one of the difficulties. In cases where the trade of the district enabled Local Authorities to avoid the importation of pigs they have generally managed to keep fairly free from the disease; but in every district where the trade has necessitated the importation of fresh stock from other districts the efforts of Local Authorities have been entirely in vain. Spasmodic efforts have been made in some districts from time to time, but where importations have again been allowed it has invariably been followed with the same result, that is the disease has been re-introduced.

5406. You are not, however, discouraged by the result of the failure (for I suppose we may call it failure) of the compulsory Slaughter Order of 1885, because that Order, though general in its character, was entrusted to a great number of Local Authorities who varied it in their operation?—No.

5407. And, therefore, in reality under the Order of 1885 you only got half the benefit of what may be called uniform action, because although the Order was general the interpretation of the Order was local?—Quite so—not so much as half I think of the benefit that might have been obtained was obtained.

5408. Can you give us any instances of particular counties which illustrate the proposition which you have just placed before the Committee, namely, that where a district cannot carry on trade without the introduction of pigs from other districts they can keep clear of the disease, and the converse?—Yes, I could name counties; for instance, in the Eastern Counties, Cambridgeshire, Norfolk, Suffolk; they are all counties that have to import considerably. Consequently they invariably get the disease again and again. They have made many efforts to get rid of it, but in vain.

5409. Now can you tell us anything about any places in that part of England which you look upon as centres of infection. Are there any places that you know about that you can tell us of?—They vary from time to time. I should not like to mention any particular places at this moment as being dangerous places in those counties.

5410. I did not mean in those counties; I meant in that part of England—in the east?—Bedfordshire is not quite in the east, but Bedfordshire, unfortunately, has a very bad reputation as regards swine fever. They have enjoyed that unfortunate notoriety for some years.

5411. Now as to the converse—the counties that have been successful in keeping it out?—One county might be named that has done very fairly well considering their difficulties, and that is Somersetshire. They have to import a considerable number of pigs, but still, on the whole, they have kept very fairly free from disease. I should say that the counties that have been the most successful probably are those in the North of England, notably Cumberland, Westmoreland, and Northumberland.

5412. Do you consider that there has been any change for the better in the condition of pig markets, sale yards, and lairs, in consequence of the Orders issued under the Acts?—Yes, for the last 16 or 17 years the Board have kept up a steady effort to induce Local Authorities to require the improvement of these places, and no doubt there is, generally speaking, very considerable improvement; but at the same time, of all the markets, and fairs, and sale yards, used for animals the efforts have been least successful in those places used for pigs. In many such places at the present moment there are pens that are used for pigs that are not paved and that are without proper surface drainage; and in many cases in markets, even large markets, the fences

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of the pens are of wood instead of iron, and, of course, it is practically impossible to cleanse and disinfect woodwork in any very satisfactory way. Local Authorities, I may mention, have their attention very frequently called to these matters by the Board, but either from indifference or from a wish not to interfere with trade, as a rule they pay but little attention to these representations, and it is almost impossible to get them to take really effective steps to enforce the cleansing of these places; that difficulty is specially noticeable in the boroughs.

5413. Do you find any distinction as between large towns and small towns in this matter. I suppose the large towns are more easy to deal with?—Yes, the large towns are more easy to deal with; the smaller boroughs are the most difficult to deal with.

5414. The Local Authorities have also powers to require the cleaning of dealers' yards and carts used for the transport of pigs. How are these regulations do you think now being carried out?—As a rule, very little is done. Local Authorities do occasionally issue orders as regards the cleansing of carts; more frequently than they do I think with regard to dealers' yards; but in neither case are they working satisfactorily. No doubt the difficulty of insisting upon the cleansing of carts is very great, but so far as the Travelling Inspectors have been able to ascertain, the cleansing of carts, if carried out, is generally carried out in a very inefficient manner. The only district I know of at the present moment where there really seems to be a good system in force is in the Borough of Doncaster. There every pig-cart that is brought into the market is detained; it is taken to a certain part of the market, and under the supervision of the officers of the local authority it is then and there cleansed and disinfected, and the owner is not allowed to take it away until that operation has been performed. But, as a rule, there are no very special steps taken, and you may usually say if there is any cleansing process of the carts it is very imperfectly carried out. No doubt the police have the greatest difficulty in enforcing it. It seems obvious and of course it would be obvious to the Committee, that where a farmer, say, has brought some pigs to a market and a constable goes up to him and insists upon having his cart deluged with water, and then poisoned with carbolic acid or spoilt with limewash, the chances are that the farmer is excessively indignant with the constable, and, very possibly, very abusive; and the constable knowing that at any rate it is a thousand to one against their being any real risk from that particular cart, is generally very unwilling to enforce any regulations of the kind. In fact there seems to be a sort of feeling of sympathy among both the owners of pigs and the police that the whole thing is ridiculous, and that it is annoying and irritating without doing any good. Although orders occasionally are passed, the result is little or nothing in most cases.

5415. I suppose, however, that that state of things is, you may say, unavoidable, because precautionary measures must very often be taken against a risk when the actual case taken by itself would not justify the measure—it is an assurance?—Quite so. That is one of the great difficulties we have always found in carrying out precautions of this kind as regard any disease. There is always the strong probability in any individual case that the precautions are quite unnecessary, and that makes people exceedingly unwilling to go to the trouble and expense and the annoyance of adopting them.

5416. Have you anything to say especially in regard to Scotland in regard to these points. Have you any special point to bring before us?—I might draw attention to the fact that in Scotland there is a considerably greater difficulty than there is in England in getting the assistance of the police in these matters. In England as a rule the police give a considerable amount of help, and they are charged with the enforcement of most of the regulations of the Local Authority, except those that are of a strictly professional character. In many cases in England the Chief Constable of the county or of the borough is appointed an inspector under the Contagious Diseases (Animals) Act, and, therefore, he gives personal attention to the enforcement of these regulations. In Scotland it appears that under the Police Improvement Act of 1862, a Chief Constable cannot be required to accept any office other than that of Chief Constable, and as a result the Chief Constables hold no office under the Contagious Diseases (Animals) Act. They take little or no interest in matters connected with disease in animals, and of course that feeling is generally—although I will not say in all cases—adopted by the constables. Therefore, the usual methods in Scotland in carrying out these things is to leave all the enforcement of the regulations in the hands of the veterinary inspectors. Of course these gentlemen are almost all in private practice, and their time is much occupied, and in consequence very frequently very little, or you may say nothing, is done to enforce regulations of this kind, I mean such as are necessary for the general requirements of sanitation. I may mention that on the 15th May next an Act comes into force affecting the burghs in Scotland making it lawful for a Local Authority to appoint a Chief Constable to any other office they may think fit; and no doubt in many cases they will appoint their Chief Constables inspectors under the Contagious Diseases (Animals) Acts; but that Act, unfortunately, only applies to burghs and not to counties.

5417. Is that the Burgh Police Act of last year?—Yes.

5418. The Consolidation Act?—Yes. That rather increases the difficulty in Scotland of dealing with matters of that kind; but of course as regards swine fever that point is not of such great importance as swine fever does not exist to any very great extent, I fancy, in Scotland.

5419. Have you anything that you desire to tell us in regard to the import from Ireland; has that ever come before your notice officially?—The import from Ireland is very considerable. No doubt the Committee have already been told that, roughly speaking, about half a million pigs a year come into this country from Ireland. Most of them are fat pigs, and that I think gives many people the impression that the danger from their importation is not considerable. But it should be borne in mind, I think, that although the large proportion of the pigs which are brought in are fat, they are not necessarily slaughtered at the port of landing. In Lancashire, for instance, where there is a large importation of Irish pigs, it is not the rule that these pigs are slaughtered at the port of landing. They do not travel very far certainly, but they are distributed among all the large towns of Lancashire and the West Riding of Yorkshire and there slaughtered. So that they travel into the country, and if they are diseased no doubt they carry the disease with them. I might mention that in 1891 the Local Authority of Lancashire complained that out of some 500 outbreaks that they had that year they had traced 100 of those to pigs imported from Ireland.

5420. What you say about the Irish pigs in the North of England is also equally true in the West. It is no doubt within your knowledge that an enormous quantity of pigs are imported from Ireland into Bristol and elsewhere and go into Wiltshire and Somersetshire to be slaughtered in the factories there?—Yes. I do not know at all what parts of Ireland swine fever exists in, and it is quite possible that there might be a strong stream of importation from certain districts in Ireland that might be carried on with practical safety, whereas from other districts it might be seriously dangerous.

5421. Apart from the general question do you consider that at this moment the trade from Ireland is a source of special danger in any way?—Not special

danger. I should say it was no more dangerous than the movement of pigs from one part of Great Britain to another part of Great Britain.

5422. I think you can put before the Committee a calculation which you have made in regard to the loss which the country has experienced from this disease during a period of 14 years?—During the 14 years since returns of this disease were first received—that is, from 1879 up to 1892 inclusive—the reports show that 319,182 swine have been attacked with the disease. Assuming that 300,000 of these were lost and that the balance 19,182 recovered so as to be practically saleable to the owner, and assuming that the value of each of the pigs attacked was, before the attack, on an average £3 a-piece, then, of course, the actual loss to the owners of pigs during that period would have been £900,000. But that would not represent all the loss, nor anything near it, because there would have to be added to that the cost of disinfection and the cost of administration of regulations by local authorities. These charges are very large in many districts, more especally where the work is done for the most part by veterinary inspectors and not by the police; and then also must be added to that the trade loss due to the regulations and restrictions on movement in different parts of the country—the interference with trade in fact. So that the loss really arising from swine fever during those 14 years must have been very large indeed, although I should not like to estimate what the actual sum was, but it must have considerably exceeded two millions.

5423. You have told us that you look upon the multiplicity of areas and jurisdictions and the variety of practice as one of the principal difficulties, if not the principal difficulty, in dealing with this illness. Now what remedy do you propose to meet that? We would like to hear your views upon any alterations in the law and practice that your experience can suggest?—With reference comparatively to pleuro-pneumonia or generally?

5424. I will ask you to give your evidence in whatever way you prefer. You can compare the practice under the Pleuro-Pneumonia Acts. I will ask you first of all whether you desire to transfer the jurisdiction to a Central authority, and if so, to the Board of Agriculture?—I think certainly it would be desirable that it should be transferred to a Central authority, as it is obvious that the multiplicity of authorities who have hitherto dealt with it has seriously interfered with any possibility of eradicating the disease.

5425. Would you then suggest that the same machinery, with necessary modifications, which is now employed in regard to pleuro-pneumonia, should be employed in swine fever?—No, I should not. Of course one sees very frequently in newspapers, and in the recommendations received from Chambers of Agriculture, suggestions that the same course should be adopted in swine fever as was adopted as regards pleuro-pneumonia, but I think if it were fully considered it will be seen that what was quite suitable in the one case might not be at all suitable in the other. It should first be borne in mind, I think, that the method by which the two diseases are spread are entirely different. It has been fully established in pleuro-pneumonia that that disease can be transmitted by the living diseased animals alone—neither persons nor substances can carry it, and these dangers can be entirely disregarded when dealing with outbreaks of pleuro-pneumonia. So soon therefore as the cattle that have been exposed to infection of pleuro-pneumonia have been traced and are slaughtered—and if they are found diseased then cattle in contact with them again are traced and slaughtered—so soon as this has been done, and the cattle are actually dead, then one can feel satisfied that that centre of disease has absolutely ceased to exist; there is no further anxiety as regards the matter whatever in that district. Of course there is sometimes a very long period of incubation in this disease, and the long time that it might continue in an obscure form made it necessary that the enquiries that we made should be of a very elaborate description indeed. The result has been that the tracing of cattle in connection with pleuro-pneumonia has become actually, you may say, an art to the officials of the Board of Agriculture. But the moment that the cattle that were suspected are dead (and that is a most important point) then the whole of the anxiety is at an end. In pleuro-pneumonia, therefore, slaughter is by far the most important weapon employed when we combat the disease.

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5426. In the case of swine fever that is totally different?—In swine fever the whole position is totally different. Even when the diseased pigs are dead their carcases remain and can transmit the disease just as well as the living animals. Then there are the trucks that the animals have been carried in, the carts that they have been carried in, the railway pens or lairs in which they may have been rested, and the markets and sale yards, and so on; they all remain a source of very great danger, so that the actual tracing of the pigs and the killing of the pigs brings one very little nearer to one's object of stamping out the disease. It is true that as regards pleuro-pneumonia a man might intentionally introduce the disease on to his premises by buying a diseased animal, but when he did this he was really helping the Board in stamping out the disease—because it was always possible to trace the animal to its origin—and therefore by his very effort to get compensation he was assisting us to find some hidden centre of disease. In swine fever the situation is totally different as I mentioned before. Even when the diseased animal is killed and buried, and the carcases of the in-contact animals are dressed, all the other dangers remain, and not only that but actually there is an increased danger from the very fact that persons have been introduced on to the premises to carry out the slaughter and the burial, as they again may convey the disease to other animals; therefore, while the utility of slaughter in swine fever may in certain cases be very great, it is only one small weapon; it is one comparatively unimportant weapon with which the disease can be attacked; the really most important weapons, it appears to me, are isolation and disinfection.

5427. Now, would you amplify that latter portion of your answer? You probably can give us some further suggestions in regard to the policy of isolation and disinfection?—The method that has been adopted in dealing with foot-and-mouth disease of late years seems applicable to swine fever; that is, that isolation should be the first and the most important point in dealing with the disease, and slaughter should be used in cases where isolation is not practicable, or is unsuitable. I may say that if we were to have a general slaughter—that is, compulsory slaughter—of diseased animals, and of the animals in contact, the cost would be very large indeed.

5428. What do you estimate that that cost would be?—I think, looking at the probability of the failure to report that has existed for a long time, that we ought to be provided with sufficient funds to deal with not less than 7,000 outbreaks during the first year. I calculate that, in order to meet the cost that would be involved, the Treasury would have to provide something like £400,000.

5429. In the first year?—Yes.

5430. Of course, you are of opinion that after the first year, and that large expenditure of £400,000, there would probably be at once a very considerable drop?—There ought to be, if not actual extinction of the disease, something very near it.

5431. Now, if it was found that Parliament was unwilling to grant this large sum—I am not assuming that it would be unwilling, but supposing, that it was unwilling to grant this large sum—what would your alternatives be?—I think there are two alternatives

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the last of which I should say is better than the general slaughter.

5432. Is that what you were alluding to just now —partial restriction in movement and isolation?—There is a second method that might be adopted, I think, which would be comparatively cheap—that is to have no slaughter at all, simply apply restrictions —stoppage of movement and restrictions on animals— not only in the infected place, but also in the surrounding district. No doubt it would be very irksome to the trade, and it would create a great deal of irritation; but I should think myself, if the trade were willing to endure it, and the country would endure it, it ought to be successful. It would be a slow method.

5433. Would you accompany that with disinfection and reconstruction of the worst sties by the Central Authority?—I should certainly include the reconstruction of the sties, where necessary, by the Central Authority.

5434. Against the large expense of the initial stages in what I may call your first plan, which you you put at £400,000, there must, of course, be set, in regard to your second plan, the large expense, which cannot be stated in exact figures, of the interference with the general trade of the country?—Yes.

5435. Which, perhaps, if it could be calculated in figures, might be found to be very large indeed?—It might even exceed that sum. I might mention that I have made out an estimate of the particulars of the £400,000. I mean that it is not a mere guess, but I have considered the different points where the expenditure would be required.

5436. I very much wish to bring out the indirect loss of the other plan, because, of course, it would be most unfair to injure the first plan by describing it as if it involved an expenditure of £400,000, while the other entailed no expense at all?—I should not like to leave that impression.

5437. No; I do not say you did. I was only anxious to have your views brought out?—I think it would involve a very large direct expense, but I should like to point this out. I think if simply regulations were made at the Central Office, and no additional steps were taken to carry them out, the attempt to deal with the disease in this way would certainly fail. I think there would have to be a very large staff. The amount saved would be about £250,000. The cost would be not less than £150,000, I should estimate, for carrying out the second plan during the first year.

5438. To which must be added the loss of business by restriction of trade?—Quite so, which would be considerably in excess of that which would be experienced under the general-slaughter system.

5439. Have you any other plan besides the two you have described?—The third plan—and the best plan, according to my view—would be to have a combination of the two: that is, to have no compulsory slaughter; there should not be compulsory slaughter even in the case of diseased animals, but the Central Authority should have a discretionary power to slaughter where they think fit, and where they think it likely to prove more successful than isolation. This discretionary slaughter would be a most valuable weapon, I think, in combating the disease, far more valuable than if the owner had a right to insist upon slaughter.

5440. Your plan, in fact, is to transfer to the Central Authority the present power of all the local authorities?—Quite so.

5441. The lines, in fact, which you would follow are, on the whole, those which have been successful in the foot-and-mouth disease in the latter outbreaks since 1884?—Yes; I think it would prove successful. Of course, we have not of late years had the amount of foot-and-mouth disease to deal with as formerly; it has not been so widespread as is swine fever at this moment. But then it must be borne in mind that there is this great difference—that at the present moment in regard to swine fever we shall only have to deal with the pig population, amounting at the outside, say, to 3,000,000; whereas with the foot-and-mouth disease, whenever we get an outbreak in the country, we have to deal with an animal population of considerably over 30,000,000 that is ready to contract the disease.

5442. Have you considered whether it would be desirable under any circumstances to strengthen the powers of the county and local authorities in regard to sanitary measures irrespective of any actual outbreak; I mean whether you could arm local and county authorities with greater powers than they now possess to enforce the cleanliness of sties and other places of that kind by ordinary sanitary legislation?—Do I understand something in the nature of the registration of premises?

5443. That would all be within the scope of my question?—I have often considered the point of the practicability of requiring the owners of pigs to register themselves somewhat on the same lines that dairymen and milk-sellers are required to register themselves. No doubt if that could be done, and additional powers could be given to local authorities to require cleansing, or a particular construction of the sties, it would be of very great benefit in dealing with a matter of this kind; but one is met with the difficulty, unfortunately, that probably it would be necessary to employ very much the same authority to deal with pigsties as now deals with dairies, and so far as my experience goes, the result has not been very satisfactory. In a great number of districts, at any rate, the requirement of registration is a mere dead letter, and the lists of dairymen where they exist at all are most imperfect. I am afraid, therefore, that if the same arrangements were made with pig-owners it would not be very efficient. There would be numbers of pigs kept on premises which were not registered.

5444. The present authorities are the urban and rural sanitary authorities, are they not?—Yes.

5445. Have you considered the desirability in regard to this matter of giving the County Councils the duties of supervising these arrangements and enforcing them where they are not carried out?—If the Board of Agriculture had the control of the matter, and had a sufficient staff at their disposal to see that pig-owners as a rule did register, I think then it might be done, but if it is left entirely to the local authorities I am afraid, at any rate in some counties and in many boroughs, it would become a dead letter.

5446. I was asking you whether you thought it would be possible to give the county councils powers concurrent with, or ancillary to, those of the urban and rural sanitary authorities, as they have in other matters?—Certainly, I think it might be done, and it would be efficient I think under the conditions that I have just mentioned, otherwise I think it would not.

5447. Would it be possible to devise a plan, such as I have mentioned, so that the primary duty should be on the urban and rural authorities, and that the county councils should have the duty of seeing that those duties were carried out, and in the event of failure should carry them out themselves; and that the Board of Agriculture should control the county council?—I have not thought of that point before, but it strikes me at the moment that if there was anything of the kind it would lead to a certain amount of friction between the two local authorities, and in certain cases there might be a difficulty from the fact that the boundaries would not be coterminous. There might in certain cases be a sanitary authority partly in one district and partly in another.

5448. Is it not the case that by the Local Government Act of 1888 all the urban sanitary authorities were brought within the limits of one administrative county?—Yes.

5449. In regard to the rural authorities, the county council now has many duties which bring it into contact without bringing it into collision with rural authorities ?—Yes.

5450. Would you see any difficulty in extending such jurisdiction in regard to matters of the kind which are the subject-matter of this inquiry ?—Speaking without having considered the question very fully, my impression is that it would be better to put the power directly into the hands of the local authorities under the Animals Act rather than into the hands of the sanitary authorities.

5451. What is your distinction between the local authority and the sanitary authority ?—By the local authority I mean the county councils and the town councils of boroughs.

5452. You would prefer to give actual power to the county council to intervene directly, as I understand ?—Yes.

5453. Such an increased duty put on a county council as the county authority would, to a certain extent, be a compensation for the loss of the powers and duties which, in other parts of your evidence, you have practically suggested they should be deprived of ?—Yes. I should like, if I may, to supplement that by this remark: although the order for slaughter and the direction as regards an infected place and so on should, I propose, come from the central authority, it would still remain of absolute and paramount importance that the loc l authority should assist the central authority, and should carry out and enforce all the requirements for isolation and matters of that kind. It would be impossible to succeed where the local authorities to stand aside and not give the central authority their cordial assistance.

5454. (*Professor Brown.*) I need not go over your evidence, but I should like to deal with the point of the cost which you estimate at something like £400,000 for the first year; does that depend to a large extent upon your scheme which you would adopt of universal slaughter at once in every centre where swine fever exists ?—Yes.

5455. In fact you would proceed very much as they did in Holland, when the country was overrun with cattle plague; an edict would go forth and in 24 hours there would not be a living diseased animal in the country ?—No, not so far as is known; but other sources of disease would still remain.

5456. Then you have two alternative schemes: I take it that in the first of these you would shut up all the diseased pigs, and those in contact; putting it plainly, you would shut them up for life ?—Yes, I should shut them up and let them die, unless the owner chose to slaughter them on his own account.

5457. And those which escaped the disease you would not allow to go anywhere but to the slaughter-house ?—That is so.

5458. For the reason that the disease may be in an occult form, or the animals may have recovered as it is called, and in either case they may be pouring out infective matter to a large extent for a very considerable part of the remainder of their lives ?—Yes; as I understand they are dangerous, I should propose that they should never be allowed to go at large.

5459. Now, from your experience of the working of the Acts and Orders, do you think that it is possible for that scheme to be carried into effect ?—I am bound to say that I think the resistance in many districts would become so great that the probability is that it would lead to the abandonment of the scheme; but if the local authorities and the pig-owners would agree to give it a fair trial, I think myself there is every probability of it succeeding.

5460. But the probabilities are decidedly against the owners of the pigs giving their consent to it ?—I think they would object most strongly. I do not myself see that there is much probability of its being accepted unless the disease should become very much worse than it is at present.

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5461. Then the only thing really in favour of that scheme is that it would save a considerable sum to the Treasury ?—I can think of no other advantage except that one.

5462. And even then the country would lose a very considerable sum of money ?—It would lead to a great loss to the trade; and the cost of administration would come to a considerable sum from the very fact that it would have to be continued probably for such a long time.

5463. The third scheme you spoke of as a combination of the two methods; and you mentioned permissive slaughter. I take that to mean that the Board should get the powers which they have now under Section 6 of the Act of 1886 in regard to local authorities. That is to say, that they should have power to order the slaughter under such conditions as they think fit, of swine affected with disease, and also swine suspected of being, or having been, in some field, shed, or other place; or in the same herd, or otherwise in contact with animals affected with disease, or being having been otherwise exposed to the infection thereof ?—Yes.

5464. At present, while they have the power to direct or authorise local authorities in those words, they cannot take those powers themselves ?—No; that power would be wanted in addition, of course, to other powers as regards entry and disinfection and matters of that kind.

5465. In fact, a measure of any kind introduced by the Board for the purpose of taking charge of swine fever should give them power to do what they think fit for the extinction of the disease without forcing shem to take any particular kind of action ?—Quite to; it should give the directing authority an entirely free hand.

5466. You would not, I apprehend propose to interfere with the appointment of the inspectors by the local authority, or to take from them those general powers of supervision which they now possess ?—No.

5467. Have you thought at all of the plan of dealing with the disease in detail: that is to say, taking Scotland for example, where there is not much of it, and clearing it out of that country to begin with ?—Yes; in applying the mixed scheme my idea on the subject would be this: The first thing, as it appears to me, is to stop the foreign importation of pigs absolutely, whether for slaughter or not; that is essential as a preliminary condition. The next is as regards Ireland, that there should be total prohibition from there, or that the disease should be dealt with in Ireland before any attempt is made to deal with it to any determined extent in Great Britain. When those two points have been settled, that is, when foreign importation has been altogether stopped, and the disease can no longer be re-introduced from Ireland, my own impression is that the most convenient and the quickest method of getting rid of it in Great Britain would be to stamp it out vigorously in the districts where the disease was not particularly rife. For instance, I should propose to begin with Scotland, and probably with Wales, and as the whole tendency of trade is always from the west towards the east of England, I should, as it were, follow the trade, and I should hope to gradually drive the disease from the west towards the east, and eventually, as one may say, drive it into the sea and stamp it out altogether.

5468. In carrying out this scheme would it be necessary to protect the district which you were dealing with from the importation of disease from other places which you would for the time being leave untouched ?—Yes.

5469. And among those places you would have to protect them from the possible introduction of the disease from Ireland ?—Yes.

5470. Can you devise any scheme by which we might still have importation of Irish pigs for slaughter without total prohibition ?—We might have at the

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ports of landing something in the nature of such places as we call foreign animals' wharves, and insist upon the slaughter of Irish pigs at those places under proper supervision. But the impression on my mind is that it would really be of very little value to the trade; it would be better, if the pigs cannot be moved alive to their destination in different parts of the country, that they should be slaughtered on the other side rather than on this side. Pigs are not good travellers by any means; they deteriorate very much on a journey; and certainly, looking at it from a safety point of view, we should be far better off if they were all slaughtered on the other side rather than on this side.

5471. That scheme, of course, would involve the construction of abattoirs for the slaughter of pigs at some of the principal ports in Ireland?—If they were not exported alive.

5472. That is in order to send them over dead?—Yes; but, on the other hand, of course, if they are sent over alive and slaughtered at the port of landing that would necessitate the making of similar places on this side.

5473. Do you think that plan would be preferable in the interest of the Irish traders to the more drastic one of stopping importation altogether?—I think that the best plan would be that the disease should be dealt with piece-meal; that the principle of dealing with it piece-meal should be so carried out that the disease should be got rid of, or nearly got rid of, in Ireland, before we began to take any very strong measures in this country.

5474. Putting that on one side for the moment, do you think it would be more to the interests of the dealers to have the pigs slaughtered in the large ports in Ireland, and to send over their carcases, than to have to suffer their total prohibition while the swine fever is known to exist in Ireland?—Yes.

5475. But you are of opinion, as I gather, that the best plan of all would be to deal with the disease in Ireland, and to get rid of it there before commencing proceedings in England?—Yes.

5476. Would that not necessitate a considerable delay in getting rid of the disease here?—That, of course, would depend upon the amount of disease which now exists in Ireland, and, therefore, as to the time it would take to clear that country. But assuming that the disease is not in a great many districts—and there does not seem to be, so far as I have heard, any evidence that it does exist in a great many districts in Ireland—it ought, I should think, to be practicable to stamp it out in a comparatively short time—in a few months.

5477. Do you think there would be a probability of getting rid of it in six months say?—I should think it ought to be practically clear within six months.

5478. That is to say, so far reduced that you would not find it necessary to take such severe precautions against the introduction of disease from Ireland?—That is so. Of course, there might be a few stray cases here and there introduced afterwards into this country, but those could be easily dealt with.

5479. That plan which you are now suggesting of dealing with the disease in detail, would be very much cheaper than the first one, would it not?—It would be very much cheaper; partly for this reason, that I think very much might be done in those districts where disease is now very prevalent, and where I should not propose, in the first instance, to slaughter very liberally—by shutting up the more dangerous districts absolutely, and the others to a certain extent, and checking the movement of pigs by putting a certain amount of difficulty on the movement of store pigs. An immense deal might be done, I think, in that direction as a preparatory step to adopting the more vigorous one of combined isolation and slaughter.

5480. Then you would adopt those preliminary methods while you were getting rid of the disease by radical measures in Ireland?—Yes.

5481. You would not be altogether idle with the disease in this country?—Certainly not.

5482. Do you think that under that system there would be any necessity for any great increase in the present staff?—Yes.

5483. Even with that method?—Even with that method.

5484. Have you formed any idea as to the additions?—Yes; for this country I have.

5485. I am talking now of the modified plan of dealing with the disease in detail; what additional staff do you think would be necessary for that?—I take it that the staff would have to be appointed outside the office altogether. I am assuming that the officers now belonging to the Board are fully occupied with their present duties, and that they would not have the time to be able properly to attend to these matters. It would be better, in my opinion, to have the staff selected entirely from outside, under the immediate direction of the President of the Board. I think that the administrative staff that would be required for that modified plan would be this:—That there should be one chief, who would have three chief assistants under him, and about 15 assistants. It would also be necessary to have a professional staff of, say, one permanent veterinary surgeon, with six assistants; and then there would have to be a clerical staff. I think the cost of that staff might be put down at something like £18,000 a year.

5486. Do you apprehend that there would be any necessity for a separate system of accounts?—There would have to be an entirely separate system of accounts, I think.

5487. The accounts in regard to swine fever would bear no comparison with those which we have already had in pleuro-pneumonia?—No.

5488. They would be much more complicated?—Yes.

5489. And vastly more numerous?—Yes. Although the items in themselves would be insignificant, still the numbers of them would be very large indeed.

5490. Your scheme and the alternative would necessitate extensive interference with the movement and sale of swine?—Yes.

5491. From your experience of the effects of dealing with the movement and sales in small areas, what should you say in regard to them?—I think that dealing with very small areas creates the minimum of advantage with the maximum of inconvenience. If restrictions are necessary, they should always be applied to a considerable area. As a rule, where there are simply isolated outbreaks, where proper measures have been taken as regards isolation, cleansing, disinfection, and so on, in the infected premises restrictions outside the infected place are unnecessary; but the moment it is known that disease prevails in the district, and, therefore, that there is a probability of there being hidden centres in the district, then restriction is wanted over a large area; in fact, the net should be thrown for a considerable distance, and then, as you find that the outlying districts are free, and that you can free a portion of the district, you can gradually draw your net in; but in the first instance you should always throw it wide.

5492. I believe you have not seen the whole of the evidence which has been laid before this Committee?—No.

5493. We were told by one witness, whose opinion is of considerable importance in the agricultural world, of a question which was asked by Mr. Chaplin of a deputation which waited on him in regard to the Board taking charge of swine fever, the question being, could the Board rely on the support of the farmers of the country; that question had been submitted by the witness to the Central Chamber of Agriculture, and the reply, as I gathered, was to the

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effect that the Board might rely upon the assistance of the farmers if they adopt a decisive policy, which, I think, the Committee understood to mean a policy of slaughter of diseased animals, and also of animals which had been in any way exposed to infection; do you think that that condition would in any way hamper the Board in dealing with swine fever?—I think it would. If the support of the local authorities is only to be bought at the cost of slaughtering all diseased and healthy pigs which may be in contact, thus making it practically compulsory on the Board to carry out those measures, I think it might hamper the Board very much indeed. For one reason, at any rate, if there are not many others; that is, that the moment you have it generally known that the owner could practically insist upon the Board buying his animals from him at a valuer's price, all his interest in buying in a safe market, or in protecting himself against taking the disease on to his premises, would entirely disappear. It would be a matter of absolute indifference to the man whether he got the disease or whether he did not; in fact, if he wanted to get rid of his stock at any time, the very best method he could adopt would be to introduce disease on to his premises. I think, therefore, if there were any such condition as that imposed by the local authorities as a condition of their support, it would be almost impossible—I will not say impossible, because I think the disease may be stamped out in that way—but it would be very expensive and very prolonged.

5494. Then would you say that for the Board to act effectually in dealing with this or with any other contagious disease of animals, they must be left unfettered by any conditions from without?—Yes; and they must have the assurance of the support of the farmers and of the local authorities unconditionally.

5495. *Sir Jacob Wilson*: From your experienc. is it the fact that disease has generally disappeared from a district when restriction on movement has been adopted, and when the stoppage of the transit of pigs from outside districts has been put in force?—Yes. It would be a prolonged method of getting rid of the disease in a district, but it would eventually be a successful one.

5496. I did not quite put my question in that way: I meant that, from your experience of the past, are you able to say that that has been the result?—That is what I meant; that has been the result in the past.

5497. I gather, however, further, that in your opinion, slaughter alone would not meet your requirements?—I think not. It has been proved to be a failure by the trial made in 1885.

5498. But, on the other hand, slaughter with judicious restriction on movement, might very likely have the desired effect?—I think it certainly would.

5499. Now, coming to the estimated cost, according to the various schemes which you have enunciated, can you give us any more detail with reference to those schemes?—Yes.

5500. How do you make up the £400,000 which you say would be the cost in the case of compulsory slaughter?—I think, as I mentioned just now, that if it is intended to deal with the disease by general slaughter there should be provision made for 7,000 outbreaks for the first year. My reason in support of that is, that if you look at the returns you will find that in the year 1885, there were close upon 8,000 outbreaks; in 1886 there were nearly 7,000; in 1887 there were over 7,000; and in 1888 there were 6,000; then it fell to 4,800; to 5,000; and 5,000 again; but then we have a good reason to believe that in those years there were many cases not reported. So that I think we should not be safe in approaching the matter, except on the assumption that we should have to deal with 7,000 outbreaks during the year. On looking at the returns for past years, it appears that the number of swine attacked in each outbreak averaged about six. For instance, we will take 1889; there were then 4,841 outbreaks, and there were 25,885 animals attacked, that is very nearly six per outbreak. In 1888 there were 6,449 outbreaks, and there were 32,241 animals attacked, which is a little more than six. We must assume, I think, that we should have to deal with six diseased animals in each outbreak. Then comes the question of the healthy swine that we should have to slaughter; we should generally have to slaughter some that were apparently healthy, as having been in contact. I think we ought to give six healthy pigs for each outbreak. Therefore, that makes a total for the 7,000 outbreaks of 84,000 pigs which would have to be slaughtered. We should only pay, I presume, half compensation for the diseased pigs, and whole compensation for the healthy pigs, so that we might say that the loss to the Board on each pig would be £2—I think that would be a reasonable sum to put it at—that makes a total of £168,000. In each outbreak the local veterinary surgeon would have to be employed to ascertain, before we slaughter, whether the animal was apparently diseased, and to send the intestines to London; and he would have to examine the pigs and make *post mortem* examinations of all those that were slaughtered. I think we should allow £4 for each outbreak for that expense, which comes to £28,000. The pigs would have to be valued before slaughter, and it is very important to get a skilled man to perform that operation, and also a man who does not live in the immediate neighbourhood—that is obvious; therefore, I think, we must allow a cost of £2 per outbreak for the valuation, making £14,000. Then in, say, half the number of outbreaks, 3,500, we should have to deal with considerable structural alterations, and it would be necessary that the premises that we were about to destroy should be valued; therefore, in those 3,500 cases we should want a valuer, which I have also put down at £2 each case, making £7,000. In every outbreak it would be necessary to guard the premises while the whole of the operation of slaughter and disinfection is going on, in order to prevent unauthorised persons from entering the premises, and also to ensure proper precautions being taken by everyone who enters the place with authority, to disinfect himself and his clothes on leaving. We should not be able to do that for less than £3 an outbreak; the police would be unable to cope with the large number of outbreaks we should have, and therefore, it would be necessary to employ commissionaires and pensioned police, and men of that class. I put that down at £3 an outbreak, making £21,000. Also there would be the cost of slaughter and the cost of burial, both of the diseased carcases and of the manure; that I put down at £3 an outbreak, making £21,000. Then there is the disinfection of all the premises, and that would be a very elaborate matter, because the disinfection would have to be very complete, and would invariably, I think, necessitate the removal of the roofs of the pig-houses, because no man could get inside without taking the roof off—he must take the roof off in order to cleanse the pig-house. In certain cases, which I will explain bye-and-bye, we should have not only to cleanse the pig-house, but also to assist the owner to re-construct his premises. I think we should put the cost of that at £10 an outbreak, making £70,000. Then in all the infected districts, and at present we have got, I think, about 60 counties, we should want to employ local veterinary surgeons to give us information of what is going on, and to keep their eyes open on our behalf when going their rounds in their ordinary practice; this was very valuable, we found, in pleuro-pneumonia; we paid them £1 a week for this work, and the money was well spent. I think, looking at the probability that we should have 60 infected counties, we should want five local veterinary surgeons in each of the counties, making 300 at £1 a

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week, which would come to £15,600 a year. For the central authority I should propose that there should be an unprofessional staff of a chief at £1,000; six chief assistants at £600; 30 assistants at £300, which, with travelling allowance for the 36, at £400 each, would make £28,000. As regards the professional staff, there should be one permanent veterinary surgeon at £800, and six assistants at £300 a year, with travelling allowances of £200 a year each, which would come to £3,800; there would be one accountant at £600, and two assistants at £150 each, which would be £900; one managing clerk for the clerical staff at £250, and six clerks at £100, making £850. That would leave a balance of about £22,000 for incidental expenses, including the cost of sending the intestines to London; that makes up the £400,000.

5501. Perhaps at this stage I might ask you to give the details of the alternative scheme, amounting to £150,000, so that we may have a means of comparison?—The £150,000 is the second scheme, with no slaughter and compensation. The £150,000 would be made up by eliminating the first three and the fifth and sixth items of the £400,000 and taking the balance, which is about £150,000.

5502. Now, with regard to your third proposal, the permissive slaughter of diseased and healthy in-contact animals, what would be your estimate there?—As regards that scheme, I think the unprofessional staff might be considerably reduced, in that case the staff would come to about £18,000. Of course the 300 local veterinary surgeons would still be wanted, and the amount to be spent in disinfection and repairs of premises would be about the same, £70,000. With regard to the first four items, the more money we had, probably the quicker we should be able to get rid of the disease; but we might spend what the Treasury were willing to give. Perhaps if they would give a total of £200,000 I should think that ought to enable the central authority to deal with the disease successfully and rapidly.

5503. That is according to the third scheme?—Yes; I should put it down at, say, £200,000.

5504. According to these various schemes can you tell us what the estimate of cost would be for dealing with Ireland in the first instance?—I have not made any calculation about that matter. I do not know the amount of disease in Ireland, except from the Official Returns, which I am afraid, as in our case, are not very reliable. I do not know at all what reason they have to suppose that they do not get reliable information, whether they have got similar grounds to ours.

5505. Then those figures which you have quoted apply to England, Scotland, and Wales only?—Yes.

5506. That is in consequence of Ireland being under the Irish Privy Council, and not under the Board of Agriculture?—Yes, I have formed no calculation on that because I do not know what method they would propose to adopt in Ireland in dealing with the disease.

5507. Whatever scheme is proposed to be adopted in England, do you think it essential that a similar method should be adopted in Ireland, and that it should precede any action in England?—I do not know that it would be essential that it should be similar; the circumstances might be different. I have not sufficient knowledge of the pig trade in Ireland to be able to say how far it would be suitable, but I should certainly still maintain that it is essential before we deal with the disease in this country in any elaborate manner, that it should practically be got rid of in Ireland first, unless there is to be total prohibition of export.

5508. But so far as your experience goes, whenever Ireland has adopted action similar to England in matters affecting pleuro-pneumonia, and foot and mouth disease, it has had a successful result?—I think so.

5509. Now, do you attach great importance to sending the intestines up to a central authority in a case of swine fever, in the same way as the lungs are sent up in a case of pleuro-pneumonia?—Yes, I should say it was absolutely necessary. I do not see any scheme that could be worked with anticipations of success unless that is done.

5510. Would you have any confidence in the viscera being sent to any other authority than the central authority?—No, I should not; the practical difficulties of working any scheme of that kind would, I think, be fatal. The invidiousness of saying what district should have special inspectors and what district should not, and what professional man's opinion should be accepted, and whose should not, would lead to such an inevitable difficulty that, I think, it would cause the whole scheme to fall to the ground.

5511. I observe also that you attach some importance to appointing a valuer who does not live in the immediate neighbourhood?—Yes; I attach great importance to that.

5512. Have you formed any opinion as to the limits of compensation that you would propose to give?—I think that the limit certainly should be considerably increased. I have heard recently of three cases where pigs have been sold—not as pedigree pigs, but as killing pigs—at close upon £10 apiece, and I think that it would be very undesirable that the central authority should not be in a position to give the fair market price for a butcher's pig.

5513. I gather that you would propose to increase the limit for pigs in-contact, but would the same apply to diseased pigs themselves?—The question about the compensation of diseased pigs is, I think, a very difficult one; my inclination is to cut it down as low as possible; but certainly not to make it more than half the value of the pig before it was attacked—indeed, I should be almost inclined to make it less—a third or a quarter; but as regards a healthy pig I certainly would increase the amount and give the owner a fair market price for his animal.

5514. If your recommendation were adopted, and you commenced to exterminate the disease in Ireland, and had accomplished that object, would there be any great necessity for establishing slaughtering places on the English side?—If the disease were stamped out in Ireland, I should propose to allow free importation of Irish pigs.

5515. Now, coming to the question of staff, I observe that you suggest that the staff should be appointed outside the Board of Agriculture?—Yes.

5516. Do you intend that it should be subject to the Board?—I think that the official who is placed in charge of this particular matter should be personally under the immediate direction of the President of the Board, and for money matters under the Treasury, but otherwise that he should in effect be independent.

5517. Then in that respect it would be different to the system which has hitherto been adopted for dealing with pleuro-pneumonia and other diseases of stock?—Yes.

5518. What is there in swine fever which necessitates such a departure?—One point as regards swine fever is that it would, and that it ought, to occupy the whole and entire time and devotion of a staff dealing with that one matter.

5519. For how long a period do you think that this exclusive treatment would be required?—It would depend an immense deal upon how far the trade would bear restrictions—to that I should attach great importance—and also it would depend upon the sum of money which the Treasury would give for the purpose of dealing with the disease. It would also immensely depend—and to this I should attach the greatest possible importance—upon the staff which is appointed to carry out the regulations. Any number of Acts of Parliament, of course, will never stamp out any disease. Such powers only enable a sufficiently energetic staff to deal with it. It will depend infinitely

more upon the men than on anything else. But I should think myself, that vigorous action for the year ought to see the matter very nearly at an end, if not quite at an end.

5520. And after that do you consider that the whole of the machinery for extermination might disappear ?—Yes.

5521. I take it that the staff you suggest would include some who are at present connected with the Board of Agriculture, and have had a large experience in dealing with the disease ?—I should not propose to appoint any officer from the permanent officials of the Board of Agriculture. The Civil Service does not readily give itself to a campaign, as you may call it, of this description—it is more of a campaign than anything else, and the Civil Service does not readily lend itself to anything of the kind. My own impression is that it would work more successfully and better if the staff were appointed entirely from the outside.

5522. Would your object be to avoid interfering with the present system of administration of that department ?—I should propose not to interfere with the present system.

5523. Have you every confidence that you would be able to put your hands upon men who would efficiently conduct the work on an appointment for one year ?—I do not think there should be any practical difficulty. The class of man you want is a man of untiring energy, of good business habits, of some social position, one who will appreciate the responsibilities of the work, and devote his whole time and thoughts to it ; and above all a man with no special knowledge in any one direction.

5524. I gather that you attach very great importance to the last provision.—Yes ; the greatest importance.

5525. I observe you require one permanent veterinary surgeon, and six assistants ?—Yes.

5526. Where would you apply for those—to what source ?—I take it that it would be for the President of the Board to select the gentleman who should direct the whole of the professional duties. I take it that he, without any very great difficulty, would be able to instruct six younger gentlemen less experienced in the particular duties required, in connection with this matter.

5527. Regardless of nationality ?—Yes ; regardless of nationality.

5528. In the event of an outbreak of swine fever, your motive in creating large areas is in order to make it quite certain that you have the whole of the disease within those limits ?—Yes ; I may mention that I should not apply restrictions to a considerable area for one outbreak of swine fever unless there was good reason to think that there was hidden disease in the neighbourhood.

5529. In the case of an outbreak would you, in the first instance, regard it simply as an infected place ?—Yes.

5530. And until you had evidence to show that it was spreading you would not be disposed to enlarge the area, or finally to fix it ?—No.

5531. Would you necessarily make it co-terminate with the boundary of a county, or of a district ? —No. I may mention the only advantage in taking the boundary of a county for restrictions is this : that you have the great advantage of having one police force employed in the same direction, and not partly one police force and partly another. The moment you get a constable on duty who has to enforce regulations on a part of his beat which do not apply to another part of his beat, it is next door to impossible ever to get the man to do his duty.

5532. Is it not the fact that during the sixteen years' experience you have had in dealing with such matters, the small areas have, in instances, failed, and you have been induced or practically compelled to establish large areas ?—Yes.

5533. Has the system of large areas been practically successful ?—It has been successful in every case without an exception, so far as I can remember, and small areas, so far as I know, have always ended in failure.

5534. Of course you are aware that in various instances and in different parts of the country, there is a strong feeling against the large areas ?—We have had to combat the objection to them again and again.

5535. But nothing has arisen to show you that large areas are otherwise than the proper system to adopt ? Nothing has arisen. This conviction has arisen in my mind gradually. The longer I have seen these matters dealt with the more satisfied I am that if any general restrictions at all are necessary they should always, at any rate in the first instance, embrace a large area.

5536. And gradually draw your line tighter until you absolutely exterminate the disease ?—Yes.

5537. Now, in the case of an outbreak of disease where many carcases have to be destroyed, do you think it is a desirable practice to bury the carcase, or have you any better system to suggest ?—In the majority of cases I think burial is the best. There are certain cases in which the carcase can be destroyed by means of refuse destructors and means of that kind.

5538. Where "Destructors" are in existence would you recommend that the diseased carcase, and also the manure which may be considered as having been in contact with the diseased animals ought to be destroyed by that means ?—No. I should never adopt that method if there were suitable facilities for burial near the place where the disease exists. The moment you destroy in a destructor you have invariably to carry along a public highway, you cannot get watertight carts, and there will be a certain amount of leakage from the carts ; and, of course, the further you may have to carry the more difficult it is to control persons and things from coming in contact. Therefore, as a matter of choice, I would always if I could, adopt burial or destruction at some point close to where the animals have been killed.

5539. In the event of an outbreak of disease in a large town, how would you meet the case then ?—There, probably, it would be inevitable that the carcases would have to be moved to a destructor or taken out to the suburbs for burial.

5540. In the case of a town they would have to be conveyed along streets or roads ?—Yes.

5541. Whereas in the country you could find suitable places for burial, in the towns, on the contrary, you would have a difficulty, and you would recommend, therefore, destruction by means of a destructor ?—I should judge each case on its own merits, but generally choosing the nearest and the quickest method.

5542. (*Mr. Stephenson.*) You have mentioned three schemes by which a central authority might stamp out swine fever ; in your first scheme you said that for about £400,000 it might be stamped out in one year ?—Yes.

5543. In one of your other schemes you said it would cost about £140,000 ?—£150,000 with no slaughter, or £200,000 with permissive slaughter.

5544. Your modified plan for officers alone would cost £18,000 a year ?—Yes.

5545. How long would that modified plan have to go on before you are free from disease ?—Of course, you know, it must be the wildest guess as to what might be the success.

5546. What I would like to get at is this—would not your first scheme of £400,000 a year, with a simultaneous slaughter and strict isolation, be the cheapest and the best way to get rid of this disease ? —It would depend, I think, upon this : if we adopt this entire slaughter—general slaughter—I should propose even then, that it should be permissive, and not compulsory as suggested. I think it was proposed by the Central Chamber that it should be

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obligatory. If it were made obligatory, and the owner knew, as a matter of fact, that he could always come to the Board and get his money if he had got the disease on his premises, I think the stamping out would probably be prolonged; if, on the other hand, although we might have a general scheme of slaughter, we had power—in certain cases where we suspected that something was not quite fair, and the man had not been sufficiently careful—to shut his pigs up and leave him to slaughter them himself, or let them die, I think that probably would be the quickest. If we had £400,000 and spent the money in that way, that would be the quickest method of exterminating the disease.

5547. Do you not think it would be very unfair to owners and adjoining occupiers to keep pigs alive and allow them to linger on and die, and spread the disease in the meantime?—Of course, on the face of it, it does look rather hard upon an owner, but I would submit that, after all, the slaughter and payment of compensation is not intended to be, and ought not to be, for the purpose of compensating a man for the loss he may suffer owing to his getting disease on his premises. It should only be paid when valuable property is taken from him and destroyed for the purpose of the common benefit, and where it is for the common benefit to slaughter, then slaughter should take place. If it is not for the common benefit to slaughter, then the man ought to have no claim whatever to compensation, but should take the consequences of having got the disease.

5548. Are you aware from your own knowledge, or from any means by which you have obtained the information, that there is much swine fever in Ireland?—I should not like to give any opinion upon that. I have no means of knowing that.

5549. In stamping out pleuro-pneumonia you did not stop the traffic in Irish cattle, did you?—No.

5550. Then why should you stop all the Irish pig trade?—For this reason: that when the Pleuro-pneumonia Act first came into force in this country the Irish Government kindly gave us every facility for inquiry, and made all inquiries themselves, and we had every reason to believe that the disease was in Dublin, and Dublin alone. Practically, you might say that the whole of the dangerous district might have been covered by a pocket-handkerchief; and restrictions were put on those animals in order to prevent any of the animals coming over to this country from that particular dangerous part. No doubt later some little disease did escape out of the Dublin dairies into the country, but it certainly never existed to any great extent, and we have no reason to believe that the disease was imported to such an extent into this country as seriously to hamper us in stamping out the disease. In the case of swine fever I am afraid that all the swine fever which exists in Ireland is not in one particular district; so far as I have heard it is scattered over a large number of counties, therefore, any such restrictions as those which were carried out with pleuro-pneumonia in Ireland would, I am afraid, be impracticable with swine fever.

5551. The stoppage of Irish pigs would be a very serious thing to the trade with England, and there would be a great deal of friction caused amongst dealers by such a stoppage?—Among certain pig dealers who are in the habit of importing pigs into England it would mean absolute ruin; their trade would be gone.

5552. And hence there would be a good deal of friction against the carrying out of your orders?—Very great friction, and it would create an immense amount of inconvenience and dislocation of trade, although I may mention, perhaps, that I do not think, so far as the consumer goes, he would be a sufferer.

5553. Now going forward to some of your estimations, it struck me that £10 for reconstruction in each outbreak was very much too high an estimate?—Of course, in pleuro-pneumonia, the premises to be disinfected were very much larger. But in that case the process had not to be nearly so elaborate and was not so important; at any rate it was not regarded as so important. But the disinfection in some cases of a cow-shed which would hold 30 or 40 cows that had been infected with pleuro-pneumonia came to as much as £25 or £30.

5554. Do you really think that it would take £10 to reconstruct a small sty which would hold two or three pigs?—No.

5555. Because the small sties are the only sties that you would have to reconstruct?—I am glad to have an opportunity of explaining what my idea is about that point. There are many sties which are in such a condition that thorough cleansing and disinfection is impossible, and the question arises in a case of that kind, whether after disinfecting those premises as well as we could, we should keep them closed permanently for something like nine months, keeping the place an infected place, and not allowing the owner to take anything in; or whether (and this I think would be the fairer, or at any rate the more popular course) we should aid the man in putting the premises into a proper condition by burning the portions which were unsuitable, and helping him by giving him a portion of the cost of putting the place into proper order. In a case of that kind, I should propose that the premises should be valued before anything is done to them, and then we might say to him: We will disinfect as far as we can, but we cannot give you a certificate to move in fresh animals, as the place is not in proper order; but if you put it into proper order, that is, into such order as we think right and proper, we will give you a sum not exceeding half the value of the improvements you have made. I think that the disinfection required in every case, together with part compensation for re-construction in many cases, would bring the average cost to £10.

5556. You have put down £2 per outbreak for a valuator, have you not?—Yes.

5557. And then you laid stress upon this, that the valuator ought to be a stranger?—Yes.

5558. Now, how do you propose for that sum to get any valuator to come a distance say of 100 miles, or 50 miles even, to value a herd of pigs, and to salvage your pigs if they were slaughtered; Do you not think £2 is much too small an amount for that?—I will tell you how I arrived at that. We paid our valuers in pleuro-pneumonia at this rate, 3 guineas a day if they were employed for a whole day, and a guinea and a half if they were employed for half a day. Now as a rule, the valuation of pigs would not take a very long time. If the valuer were within a moderate distance it would not take him a whole day; it would only take him half a day; and in certain cases where outbreaks are numerous, as they would be in some districts, it is very likely that a man might be able to value at three or four premises on one day. Therefore I, as it were, split the difference; I added a little to the guinea and a half, which we gave for valuing for half a day in pleuro, and put it down at 2 guineas, which would be sufficient as far as my experience goes.

5559. (*Chairman.*) Is it the duty of the valuer to salvage the carcases;—No, we should keep the two duties completely apart; he would have nothing to do with that.

[Adjourned for a short time.]

5560. (*Mr. Carrington Smith.*) I understand you stated that you objected to a general system of compulsory and universal slaughter, because that afforded some inducement to the owners of pigs to take advantage of it, in order that they might be gainers in pocket; possibly you think that they might introduce disease?—I did not intend to give that impression. I meant to say this, that it would make them careless about getting the disease; it would make them

indifferent as to whether they got healthy pigs or diseased pigs on their premises. No doubt there may be isolated cases in which you might find a man who would be such a scoundrel as deliberately to try and commit a fraud by getting disease on to his premises, but I take it that that would be only very exceptional. But many people might, I think, be very much less careful if they knew that they could always come to the Government, and get their money when they did get disease on their premises. That is the impression which I intended to give.

5561. Do you not think, that if that were a legitimate objection, and I do not say that it is not, it would equally apply in cases of pleuro-pneumonia?—No, I think not, because they were not able to do it with pleuro-pneumonia. They could not get the disease except by having a diseased animal, and the fact of their being careless did not hurt us at all, for if they did get disease by any chance through carelessness, you might say that it was rather an assistance to us than otherwise, for we traced the place whence they got the diseased animal, and that revealed to us a diseased centre. With swine fever it may not be so at all, because the disease may be carried by other means than by a living animal—it may be carried by means which we could not trace.

5562. Still, you could use it as an evidence helping you to trace the source?—Not necessarily, because the animal might come from one direction and the disease might be brought by a person or thing coming from a totally different direction.

5563. You have very properly drawn attention to the fact that slaughtering in 1885 and 1886 did not show itself successful in its results; Do you at all attribute its want of success to the fact that the slaughter was only general and universal for three months?—No, I do not attribute it to the fact of its being in force such a short time. I attribute it to the manner in which it was carried out, and to the want of other steps being taken in addition to the slaughter; steps I mean in the direction of isolation, and disinfection of persons.

5564. But supposing those other steps had been taken, and I entirely agree with you that they were not taken, would you consider three months a sufficient length of time in which to form a just estimate of the value of the trial?—Yes, I think that ought to have given some evidence.

5565. As a matter of fact, I may say of my own knowledge that I had the disease twice myself, and I have here a return from a gentleman who has given me authority to use his name, Colonel Levett of Wychnor, who had the disease once himself. He and I are both members of the County Council of Staffordshire, and we are in entire agreement that if anything should happen to give us the disease again we would immediately, on our own account, have the whole of the animals on our premises slaughtered. I may say that in each case when I had the disease myself (we will say that I had it five years ago, and eight years ago) I did slaughter the whole of the animals, and Colonel Levett did the same. So convinced are we that we could not bear the anxiety, and the hopeless risk of keeping these animals alive, that we say advisedly, that although as a local authority we do not practice slaughter, we ourselves, as individuals, at our own risk, immediately on the clear declaration of disease, will slaughter the whole of the animals on our premises, and keep our premises free I say for at least two months. Now do you think we are right in coming to that conclusion?—I should think in all probability it would be to your advantage to kill them.

5566. Then if it would be right for us as individuals to do it on our own responsibility, and at our own risk, taking into consideration all the circumstances of the case, would it not be a right thing for the Board of Agriculture, or for the local authorities under the influence of the Board of Agriculture to do the same thing?—Not necessarily, I think. In the one case you do it for your own benefit and advantage, but the Board would have to consider as to whether it would be for the benefit of the community at large.

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5567. Then you have said, and very properly said, and I wish to emphasise this most strongly, that it would be totally impossible for the Board to carry out any one of the three alternative schemes which you have named, without the full concurrence and help of the local authorities; now would you take what I have stated as evidence that farmers and local authorities were in favour of a regular system of compulsory slaughter and compensation? Would you take Colonel Levett's opinion, and my own opinion, as some indication of the general run of public feeling; as an indication that you would get the help of the local authorities, and the help of the farmers, if some system of compulsory and contemporaneous slaughter was suggested by this Committee and carried out afterwards by legislation?—I think that if the country at large and the farmers generally indicated that they thought the system of compulsory slaughter was beneficial, and gave their entire help, and took all proper precautions to prevent the re-introduction of disease on to their premises, in every such case it would certainly be worth the while of the central authority to slaughter. But unless that was very evident, unless the farmers as a rule who had the disease were very careful not to introduce the disease again on to their premises with fresh stock, or by other means, I do not think it would be worth the Board's while to slaughter. With regard to that point I think it would be very desirable that the Board should have a discretion.

5568. Can you suggest to me any way by means of which either local authorities or farmers could make it evident, more evident than it is now, that they are in favour of a system of compulsory slaughter?—No doubt in many cases where the circumstances are favourable, we should carry out slaughter as far as the money would permit, and we should see very shortly whether the district was in favour of that or not, because then the steps we should take would be successful; but if there was a spread of disease accompanying the slaughter, I think it would then be for the Board to hold their hand, and probably adopt isolation more freely than slaughter.

5569. Granted that you are quite right with respect to a system of restriction and isolation, and I myself grant it most fully, do you think that the course which is now being adopted by the County of Salop is a correct course? They have interdicted all counties which do not take advantage of the Act, and slaughter. I had myself to receive a deputation, a couple of months ago, from Shropshire. About four of the local authority attended. They pointed out to the Staffordshire executive that we were the only county adjoining Shropshire in which slaughter was not adopted. There are eight counties touching Shropshire on its borders, and seven of those counties have fallen in with the view of Shropshire, and have adopted the principle of slaughter. Salop receives pigs from them, and refuses to receive from us in Staffordshire because we do not adopt it. I may say plainly that the only reason we have in Staffordshire is, because the thing has been tried, and we have found that the disease is re-imported whenever it has been extinguished. Now, do you think that that indication of opinion from Shropshire is a sufficient indication that the public feeling is pretty well unanimous in the County of Salop, and in the seven adjoining counties who have adopted voluntarily the principle of slaughter; do you not think that that is a fair indication that there is a general concensus of public opinion in the direction of slaughter?—I think there is no doubt that there is every indication. That is an indication that the owners of pigs would very much sooner that the central authority should step in when they get disease, and slaughter their pigs and give them their money. But I do not know that it is an

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indication that the farmers would be likely to put themselves to great inconvenience and to submit to great inconvenience to prevent the re-introduction of the disease if that were done.

5570. The farmers themselves in Shropshire have interdicted their markets of purchase by their own act, that is, they say, "We will not take a pig from those counties that do not slaughter." They will not take a pig from Staffordshire, although there are markets on the borders of the two counties which are really served by the two counties. They feel it a terrible grievance, and consequently they came to us to say, "Why do not you, Staffordshire, consent to slaughter, as we do; we cannot have anything to do with you, because you have not got clean hands, and we want you to have clean hands." What do you think of that?—I think it indicates that they have got what I should imagine to be rather an undue confidence in the value of slaughter, and slaughter alone. They think that if a neighbouring county slaughters, that will give them practical immunity and they may then safely allow importation from that county. But I do not see myself that that would be so. If slaughter necessarily stamped out the disease they would be right, but I do not think slaughter does necessarily stamp out the disease, and so I think they are wrong.

5571. I think I may say again that I entirely agree with you that slaughter alone ought not to be looked as the only means of stamping it out; it must be accompanied by proper measures of restriction and disinfection. May I take it from you that if there were a fairly good indication of concurrence of opinion amongst farmers and local authorities, that farmers would submit to restriction, and the necessary loss of trade, that that would be a sufficient reason for you to alter your opinion, and to advise a system of general slaughter accompanied by restrictions and loss of trade, as there necessarily would be?—I think I mentioned this morning that if the general slaughter be carried out under suitable conditions, and persons took proper precautions against introducing disease on to their premises, general slaughter would possibly be a rapid way of getting rid of the disease.

5572. I will now pass to another point touching upon this question of slaughter; you have stated that probably there would be 7,000 outbreaks to deal with?—Yes; I have.

5573. Do you not think that 7,000 outbreaks, which I think you have taken from the reported cases——?—Yes.

5574. Is a statement in exaggeration of the actual fact. That is to say, do you not think that some proportion, I think myself a considerable proportion —of those 7,000 outbreaks are not real cases of disease?—No doubt that is so, but it seems to me that if we are going to deal with it in a liberal way we must make such provision that we shall be tolerably certain will cover all eventualities. Now, looking at the fact that in 1885, 1886, 1887, and 1888 the outbreaks reported then were fully up to or very close on the 7,000; and seeing that very small compensation was paid during those years as a whole, for many local authorities did not pay any compensation at all, I think, even making allowance for those spurious cases which would probably be reported, we ought to be in a position to deal with not less than 7,000 outbreaks in case they should occur. I do not think it would be safe to provide for a fewer number.

5575. I think I should be right in saying, as representing the executive of our county, and representing also the constabulary who have worked with us all through most heartily, that we are strongly of opinion that at least one-third of the reported outbreaks which pass our veterinary surgeons are not really cases of swine fever?—That would, no doubt, very considerably reduce the cost, but still it must be borne in mind that even in the spurious cases there would be a certain amount of expense incurred by them.

5576. If the responsibility be put personally, as it would necessarily be, upon the veterinary surgeons who transmitted the suspected organs to head-quarters, do you not think the veterinary surgeons would be much more careful in passing their professional opinion with respect to a *primâ facie* case of these suspected organs than they are; would it not make them much more careful than they are now when they simply have to give a report that such and such a case is a case of swine fever?—I think that is a question of a professional character, if you do not mind my saying so; too much of a professional character for me as a layman to form any opinion which would be of value to the Committee.

5577. May I put it in this way. Has your experience with respect to dealing with pleuro-pneumonia led you to the conclusion that the local veterinary surgeons are more careful in sending up to head quarters here samples for diagnosis than they were in putting cases down as cases of pleuro-pneumonia when the ultimate decision rested with themselves?—No; I should not say so. I should not say that there is any greater care. There is nothing whatever to indicate that there has ever been any want of care, and there is therefore nothing to indicate any greater care.

5578. Simply a want of skill in diagnosis?—I do not know that they have shown a want of skill in diagnosis. I understand that the diagnosis during life is exceedingly difficult, and all they have reported as regards pleuro-pneumonia is suspicion; they never go beyond the question of suspicion.

5579. Are they obliged to send up the organs if the beast is slaughtered?—The operation in carrying out pleuro-pneumonia is this: where a veterinary surgeon suspects a case of pleuro-pneumonia he reports it to the Board, and the Board, as advised by their professional officers, and where they think fit — practically, I think, in nearly all cases — order the slaughter of the animal, and the lungs are invariably sent up to London.

5580. Then all the suspected organs are sent up in every case in which slaughter under suspicion takes place?—Yes; always.

5581. Now, with respect to the limit of value, I think we understand that you would suggest an enlargement of the limit of value in the case of healthy pigs?—Yes.

5582. Would you suggest any particular sum?—It is not a matter on which my opinion, I am afraid, would be worth anything, as I do not know anything of the value of pigs. I can only say that on three occasions lately I have heard of fat pigs selling for either £10, or very nearly £10, and, therefore, I presume, there are cases in which it would not be very uncommon that a pig would be worth £10.

5583. Then I may take it that you would not consider £8 as too large a maximum?—No, certainly not.

5584. Would you apply the same maximum to the diseased pigs, but reduce the proportion below one-half?—I take it that the method of valuing a diseased pig would be this: that the valuer would make up his mind what the value of that pig was before it became diseased.

5585. That would be the same maximum then?—Yes; but then there would only be, of course, a certain proportion of that sum to be paid for a diseased pig—some proportion which would be decided upon in the Act.

5586. Would you suggest that the existing proportion of one-half should be reduced below that one-half?—I am rather inclined to say yes; but that is not a matter on which I think I could give an opinion of any great value.

5587. In order to keep things on all fours it would be quite right to keep up the same maximum, would it not, upon the healthy pigs as upon the diseased pigs?—I think the original value of the pig should be taken on exactly the same basis.

5588. Then may I take it that, supposing the Committee were in agreement that the amount for diseased pigs should be reduced from one-half to one-third, it would be an improvement if the maximum was raised?—I think myself that the maximum might be raised fairly, and I think it might be a good thing if the proportion for diseased animals were reduced. The reason why I take that view is that I think it would encourage persons to report early—that is, before they had a considerable number of pigs affected,—if they knew that the delay would materially reduce the amount of compensation they might receive.

5589. Now, you stated that you would not advise the employment of any of the staff which has recently been employed with respect to pleuro-pneumonia and foot and mouth; but are there not considerable numbers of that staff who might be supposed to be at liberty?—I might mention, as regards pleuro-pneumonia, that a certain number of permanent officials were employed on it, together with a certain number of temporary officials who were employed only for a time. Many of those temporary officials have now been dismissed, their services being no longer required. I have no doubt that their services would be of very great value to any officer who might deal with swine fever; but that would, of course, be a question for the person himself who might have charge of the matter. It should be left to him, I think, as to the assistance that should be given him.

5590. As a matter of fact, would you not recommend someone who had previous experience in pleuro-pneumonia?—I think that their services would be very valuable.

5591. What disease is known to exist in Ireland in proportion to the number of pigs kept. Can you answer that question—probably not?—I cannot; I do not know anything of the disease in Ireland. I have not been into that part of the question.

5592. You spoke of a certain local authority; Lancashire I think it was, having traced a considerable proportion of cases of outbreaks of disease to Irish pigs?—Yes.

5593. Have you any evidence to show how long those Irish pigs had been upon English ground before the outbreaks?—No. I only know that I saw a letter from the Lancashire local authority stating that out of 500 outbreaks which they had had in their district during the year they had traced 100 to Ireland. That letter, I may mention, was written with the view of obtaining power from the Board to enable the local authorities to prohibit the importation of Irish pigs.

5594. Now, what disadvantage would there be in applying the same measures, whatever they might be, simultaneously to England and Ireland, instead of taking Ireland first and England afterwards?—I think the objection is that you would have to deal with the whole of the United Kingdom in the same way and at the same time. The general drift of the pig trade throughout the United Kingdom is, I think, from the west towards the east. I do not mean to say that they do not go back from the east towards the west in some cases, but the general drift is certainly from the west towards the east. I should think myself that the disease could be best dealt with, most economically and most conveniently dealt with, piecemeal, and therefore I should begin with Ireland as being the most westerly portion of the United Kingdom. There is a large exportation from Ireland to Great Britain, but there is practically no exportation from Great Britain to Ireland.

5595. Do you not think that you would get public opinion much more strongly in favour of the central authority acting in this behalf if the action was simultaneous and universal; all the people interested in the United Kingdom being at the same time put under the some restrictions, and, as it were, helping to bear each other's burdens just for a time?—There would not be equality of restrictions simultaneously even then, for this reason, that where the disease prevailed the restrictions would have to be the most severe.

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5596. But it seems to me that these Irish pigs of which the Lancashire authorities complain might very reasonably have been supposed to have taken the disease during transit, either in the vessels or on the railway truck, or in the cattle lairs?—I do not quite follow you.

5597. You have stated that the Lancashire authorities complain that a certain proportion of the outbreaks were clearly traceable to Irish pigs; did those Irish pigs remain in life sufficiently long after they left Ireland to contract the disease during the transit?—There was no evidence as to that in their statement.

5598. Would you think it possible that the pigs might have taken up the disease after they left Ireland?—I think it quite possible that some of them did, because there is a great deal of disease in Lancashire.

5599. Now, with respect to the third suggestion you made, that is the suggestion as to discretionary powers. Do you not think it very likely that if discretionary slaughter were left in the hands of the central authority that authority would generally exercise their discretion in favour of slaughter?—I think they would carry out slaughter in every case where they thought it was to the advantage of the country, and where they thought the expenditure would be warranted by the general advantage which would be gained.

5600. (*Mr. Joseph Smith*). You spoke of Cumberland and Northumberland, and two or three counties in the North, which are pretty nearly free from disease; to what do you attribute that freedom?—They are not very largely importing counties; Westmoreland and Cumberland certainly are not. I may say Northumberland imports a good many pigs, which pass through to other districts and do not remain there. The pigs that do come into those counties are, I think, for the most part, fat pigs, and they do not remain alive in the counties for any considerable time. Then I should also attribute the fact of their keeping free from the disease considerably to the circumstance that they do not import many pigs from other counties in Great Britain, and last, but not least, I should also attribute it to the care and precautions with which the local authorities deal with outbreaks when they occur.

5601. Do you think that if the same care was exercised in other counties it would largely tend to diminish the disease?—Certainly, and stamp it out; in fact, the want of uniformity in their views on those points is the cause of the disease not having been stamped out long ago.

5602. And you think it is impossible to get that uniformity by utilising local authorities?—I am afraid it is impossible; their interest is so varied and so very different that it would be practically impossible ever to get them to act together.

5603. Do you not think that the local authorities could be worked in with the Board of Agriculture in the same way as with the pleuro?—Certainly; I should propose exactly in the same way as they were in pleuro. They assisted the Board very much indeed in their exertions as regards pleuro, and unless they would exert themselves in a similar way, at any rate, as much as they did in pleuro, we should not have much hope of success in swine fever.

5604. If you could get the same assistance from local authorities as you get now in cases of pleuro, do you not think that it could be worked at a much less cost than you have estimated?—I am assuming all through in these suggestions that I make, that the local authorities will give the same assistance as they have in pleuro.

5605. Do we understand from your figures about

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£240,000 of the £400,000 will be spent in staff and machinery for carrying out the Act, and not in actual compensation?—No; the other way, £300,000 will be spent in compensation and cleansing and disinfection. It will not be spent on the staff.

5606. Of that £400,000 you only gave your figures for £160,000 to be spent as compensation?—More than that; £168,000 in compensation, £14,000 in the valuation of the pigs, £7,000 in the valuation of the premises, £21,000 for guarding the premises, £21,000 cost of burial and slaughter, and £70,000 for repairs of premises.

5607. Do you not think that the police would guard the premises?—Where the outbreaks were few no doubt the police would be sufficient; but where outbreaks are numerous, as they may be expected to be in most districts, then it would be impossible for the police to do it.

5608. As a fact the police do render assistance at present, do they not?—I do not think there is anything in the nature of a regular guard kept upon the premises in outbreaks of swine fever—nothing in the nature of the guard that we have had recently in foot-and-mouth disease. We kept persons watching night and day over the premises to prevent anybody approaching the diseased animals. I do not think anything of that kind has ever been attempted as yet with swine fever, but it would be quite as necessary.

5609. You estimate that there would be about 42,000 diseased pigs to kill, and 42,000 healthy ones?—Yes.

5610. On which you consider you would lose £2?—There would be a loss of about £2 on each.

5611. Is it not a fact that the pigs which die with swine fever are generally small ones?—That is a professional question, but I fancy that a great many die at all ages.

5612. My experience is that it is generally the little ones that die. With reference to the 42,000 healthy in-contact pigs you would not suppose if they were killed and sent to market that you would lose £2 each on them, would you?—Under the conditions under which they would be slaughtered, and the difficulty of suitably dressing the carcases, I should think there would be a loss of that amount.

5613. You would not let the healthy ones go off the premises, would you?—No.

5614. You would slaughter them?—Wherever possible I would slaughter them on the spot.

5615. I should have thought that that estimate would have been much in excess, because that puts the diseased pigs at £4 each?—The price of pigs is going up I believe very much.

5616. The price of pigs now has gone up, and they are worth more than they were?—You may be sure in all these cases the Government would pay more for pigs than other people do; we certainly pay more for cattle than other people do.

5617. You think the Government ought to pay where they slaughter on a liberal scale; and this estimate is made out on that basis?—I think there clearly should not be a loss to the owner, and indeed, unless you give very extraordinary powers to the Board to refuse arbitration, and so on, I am quite sure that in effect we should always have to pay a liberal price. The method we adopt in pleuro-pneumonia, and I presume it would be adopted in swine fever, as regards valuation, is this, that a valuer is brought by the Board and paid by the Board, and the owner is informed of that valuation, and he is invited to accept it, but if he declines to accept it then we have to go to an arbitrator under the Arbitration Act; that is, if the Government and the owner can agree as to an arbitrator it goes to that arbitrator, whose decision is final. Failing that, we have to apply to a Judge in Chambers to nominate an arbitrator, and our experience of the past is that a man gets a very liberal allowance for his animals.

5618. But it would be a very different thing to settle an arbitration amongst a few pigs to what it is amongst a herd of cattle?—Even if it be practicable, and I do not think it would be practicable, I do not think it would be discreet for the Board to endeavour to give anything less than the value of the pigs, and if they do not give less you cannot hit upon the exact right sum, and you may be pretty sure that they will get more.

5619. You say that you think the pigs go from the west to the east?—I say that is the general drift of the trade.

5620. Do you think the disease will follow the same lines?—I think so, because we observe this, that certainly in the west of Wales, and I believe I am right in saying also in the west of Ireland, there is very little disease, and never has been much disease.

5621. There is quite as much disease in some of the western counties of England as there is in the eastern counties?—Not the extreme west I think. The only county in the south-west which is bad is I think Devonshire; Cornwall is always pretty free.

5622. Lancashire and Staffordshire and some of those counties have the disease?—They import largely from Ireland, and if they import from the diseased districts that may account for keeping it up there.

5623. We find that there is very little disease in Northumberland?—There is very little.

5624. Yet we understand that they import from Ireland?—They do, but I think almost entirely fat pigs; hardly any stores.

5625. In the eastern counties, Norfolk, Suffolk, and Essex, there is a considerable amount of disease?—Yes.

5626. In Essex they paid compensation until 1887, and since then they have dropped it. Your idea in stamping out by degrees is that that would be cheaper?—It would be very much cheaper, and I think more certain.

5627. Do you not think that if the farmers are hampered, and these restrictions are put on larger areas, and no movement is allowed, that that would cause a deal of dissatisfaction?—I am afraid it would.

5628. In some districts, at any rate, if not in others?—So far as my experience goes it is always the same thing as regards these matters. What everyone likes very much, of course, when they get disease, is that the Government should step in and relieve them of their loss, take their pigs and give them their money. When the Government has done that the general feeling in that particular district, I think, is that the Government has done quite enough; then the farmers like to be left alone, and they do not want any restrictions at all.

5629. As a fact, the Government never have stepped in and paid for the pigs yet?—No, not as regards pigs, but I mean as regards any animals, that is the general feeling.

5630. It is generally the ratepayers of the district who have to pay, and I think that is where the grievance comes in. You think that in Scotland the police are under different regulations?—I believe that the Scotch Police Improvement Act puts the chief constable in rather a different position to that of the chief constable in England and Wales. As a matter of fact, I may say that my experience goes to show this, that the duties as regards contagious diseases are much more frequently entrusted to veterinary inspectors in Scotland than they are in England or Wales.

5631. Is it not a fact that under many of the local authorities in England, the inspectors of police, or the superintendents of police in the Petty Sessional Divisions are employed, and not the chief constables?—Very frequently the chief constable and the superintendents, and in some cases the sergeants. It appears to me that the more the police are appointed inspectors, as a rule, the better the thing is worked.

5632. You have never seen or found any difficulty in the police in England carrying out the powers they

have now ?—No. Of course they are a little more active in some districts than in others, but, as a rule, whenever we have solicited help from the police, we have always obtained it, and they do their duty very well, I think.

5633. Your hesitation in recommending compulsory slaughter for both diseased pigs and pigs in contact is because you think it is an inducement to carelessness, or that it may result in carelessness, on the part of farmers ?—I think it would assuredly result in a great deal of carelessness on the part of many persons.

5634. (*Mr. Wardlaw Ramsay.*) You stated, I think, that you thought that the licensing of dairies had been very imperfectly carried out in some cases in some counties in the past ?—Yes.

5635. Can you give any reason why that should be so ?—I do not know of any reason more than this: that in some cases the local authorities do not attach much importance to the registration of dairies, and therefore they have never taken steps to compel dairymen to register.

5636. You do not think that local pressure, or influence of any sort, would have any effect in preventing the registration ?—No. I do not think so; I think it is generally indifference; they look upon it as a matter of no importance.

5637. Now, with reference to these veterinary surgeons—the one permanent veterinary surgeon and the six assistant veterinary surgeons—where is to be the headquarters of those officers ?—In London.

5638. And they would be sent down by the Board as occasion required ?—I take it that they would be employed for the most part in inspecting the diseased portions sent to London, but occasionally, in special cases, no doubt it would be necessary to send them to make local inquiries.

5639. Then would you recommend that in no case should the Board employ local veterinary surgeons ?—I should suggest that they should. In all the reported outbreaks they would invariably employ a local man to go and see the pigs, and give his opinion as to whether they are diseased or not, and if, in his opinion he does find disease, then, on instruction from the central authority, he would kill a specimen, and send the internal parts up to London.

5640. But then those veterinary surgeons so employed would be, of course, in addition to this staff ?—Quite in addition.

5641. I understood you to say that you attached great importance to the co-operation and goodwill of local authorities; may I ask whether you are aware that some of the local authorities in Scotland, rightly or wrongly, have felt themselves aggrieved in the past by the attitude of the Board of Agriculture towards their local authorities during the recent endeavours of the Board to stamp out pleuro-pneumonia and foot-and-mouth disease ?—I know that in certain individual instances—certain special cases—they considered themselves to be aggrieved in not having been more fully consulted, with regard to foot-and-mouth disease restrictions, but I am not aware that there was any general feeling as regards that point.

5642. Thank you, that is what I want; the next question will bear upon that. Then would you think it politic to do everything possible to conciliate local opinion short of weakening the Board's power of ultimate decision as to their course of action ?—Most assuredly; and that has been the course always adopted in the past.

5643. Would you consider it desirable to confer with local authorities as to the local conditions, or as to the effect of the topographical features of a county in naturally preventing traffic between different portions of a county before finally assigning the delimitations of large infected areas ?—Under certain conditions I should think it would be desirable to consult them on those points.

5644. Do you understand my meaning ? For instance, where a county is bisected by a high range of mountains, where there is naturally no intercourse whatever between the two portions; that is what I want to bring out ?—I think I know the case to which, probably, you are referring particularly—Perthshire.

5645. Yes. Then I think you said that you did not attach much importance, at least, you have told us what importance you did attach, to county boundaries as the limits of infected areas; now, supposing the boundary of two counties passes through a farm, one county being entirely scheduled, the other being free, would you treat that farm wholly as in one county, or the other ?—I should not propose to make any exception. I quite recognise the inevitable anomalies that arise with any boundary that you may take. Difficulties and anomalies are always constant. But I think that if you were to insist upon including the whole of a farm in a scheduled district where you had taken a county as your boundary, and the county boundary ran through the middle of a farm, you would be increasing the anomaly rather than removing it, and therefore I should leave the county boundary.

5646. You would not put the farm into one county or the other for the purposes of the Board ?—No.

5647. Then, I would just like, as my last question, to put this case before you, perhaps a somewhat extreme one, and I will ask you a question at the termination. We will say that you have a city in an entirely scheduled county within six or eight miles of the boundary of another county which is not scheduled; an infected place exists close to that boundary, but animals can be freely moved into the city from the adjoining portion of the unscheduled county, although quite close to the infected place; I do not know whether you follow me ?—I quite follow you.

5648. Would you not consider that as a strong case against the value of county boundaries as limits of infected areas ?—In a case of that kind, as a rule, it probably would not be adopted; at any rate, a single county would not, as a rule, be taken as an area to which restrictions should be applied. But there would be exceptions; there would be certain conditions in the trade as regards that county, and certain conditions as regards the people who are in it, which might make it desirable to take that county, and not to take the other counties which are nearer, and which you may say would appear to be more closely connected with the city than the distant part of the county which you shut up.

5649. I would just like to follow up what I have asked by a brief explanation. This actually occurred in the county of Midlothian, and we had a witness here the other day who had the pleasure of seeing these animals taken through his farm in floats to the Edinburgh market, whilst he could not take his own there. These animals were coming from a place in East Lothian, about 18 miles from Edinburgh, just on the borders of Midlothian which was scheduled, whilst animals quite as far, and even farther, away from Edinburgh, but on the Midlothian side of the boundary, could not be moved, although the latter were not nearer to a centre of infection than the former. *There* [*illustrating*] was the boundary of the county of Midlothian, and *here* was an infected place, witness's farm being *there*, and the boundary at *that* point; the animals came in, and he had the pleasure of seeing them walk past his farm, or rather carted past his farm into Edinburgh. You see the two places were comparatively quite close together, only the one county was scheduled, and the other was not, and yet at the same time from a part of Midlothian ten miles away from Edinburgh you could not send any animals. That was the object of my question ?—As regards that carting, I think that was quite irrespective, was it not, of any restrictions as regards the infected district; the carrying had nothing to do with it ?

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5650. Yes, certainly ?—As regards declaring the whole of that county an infected area in that particular instance, I may mention that to the best of my belief there were two matters that induced the Board to close the whole of that county for the time. One was, that large sheep sales were going to be held just outside the county. It was impossible to know how far the disease had spread to Midlothian, but we knew that some months before it had been down in that very district, from which many of the sheep would be likely to be moved out of Midlothian into the adjoining county for sale, unless they were stopped. Now, knowing how serious foot-and-mouth disease is amongst sheep, and how very difficult it is to detect, it was regarded as a matter of the greatest possible importance that for the moment no sheep should go out of that district, where we knew foot-and-mouth disease had existed some few months before, to these sheep sales. That I think was the principal point which the Board had in view when they closed that district. It was not chosen simply because it seemed symmetrical to the eye, but for an absolute reason that they had in their minds. I may mention that there was another reason ; we knew of certain persons —I think it best that I should not mention them—who had before we detected the outbreak of the disease at Leith been to look at the diseased animals, and we knew that most assuredly, if these sheep went out to these sheep sales in Roxburgh, these persons would have gone down to the sales—and we would rather that they did not.

5651. Just one further question : are you also aware that the local authority felt that they were not kept as fully acquainted as they might have been with the actions or intended actions of the Board of Agriculture ?—I am sorry to say that I believe there was a feeling of that kind, and it was very much to be regretted. Certainly I do not think, so far as I can speak for the officials of the Board, that there was any wish to keep them in ignorance of what was going on, but we were at that time working under the most extreme pressure ; you can say that every one of the officers of the Board was working 16 or 18 hours a day, and it is very possible that there may have been some oversight in informing the local authority of every step that was taken. These steps followed very rapidly one on each other, and there may have been some regrettable instance in which they did not inform the local authority, but there has always been the wish—I know that—to give the local authority every possible information.

5652. (*Sir W. Kaye*) As far as I understand, you do not intend to make any point against the action of the Irish Department ?—No.

5653. You are satisfied that the Department in Ireland has co-operated cordially with the Board of Agriculture in everything that has been done ?—Certainly ; we should never have got rid of disease without it.

5654. You made some objection to the position of the police in Scotland, which rendered it difficult for them to act as they ought to do in reference to these orders under the Act ; are you aware that we have splendid assistance from the police in Ireland ?—So I believe ; I have always heard them spoken of very highly.

5655. We have a force of nearly 12,000 men paid by the Government, who, under the Act, are obliged to assist in carrying out the Act, and do so cordially. Do you think that is a great help to the Department in carrying out these works ?—A most valuable assistance, I have no doubt.

5656. Are you aware that all animals coming from Ireland are previously examined at the ports, and licensed before they leave for exportation ?—Yes.

5657. And those licenses enable the Department to trace up the animals, if any complaint or objection should be made about them afterwards ?—I do not know whether it is the fact that animals can be traced in that way ; it occurs to me that it must be very difficult to identify a particular animal.

5658. You know the license contains the name of the breeder, the name of the owner, and the number of animals dispatched ; in that way, I think, as Professor Brown knows pretty well, we have been able to trace the whereabouts of different animals which have been charged with disease ?—The difficulty would be this, would it not, the owner, that is the exporter from Ireland, might be found, but he might have bought animals from, say, a dozen different farms.

5659. That is quite so ; but then at the same time we can follow up the animal under these licenses ?—You would have considerable difficulty, would you not, supposing the man had bought from 12 farms ?

5660. Of course there is always that difficulty ?—It would be very difficult to tell which of the 12 the diseased animal came from.

5661. That is always difficult, of course, but then it is important that we are able to get at the man in the first instance ?—Yes.

5662. Now, with reference to these Lancashire outbreaks that you have referred so much to, are you aware that the Irish Department disputed the fact, and alleged that there was no evidence whatever to prove it ?—I was not aware that the Irish Government had disputed the fact ; but in the letter that I saw there was no evidence adduced to show that they had actually traced it.

5663. You say that you have not any sufficient knowledge yourself to speak about the Irish pig trade ?—That is so.

5664. And as to swine fever in Ireland, you say you have no information as to the extent of it ?—Except from the official returns, none.

5665. But you are aware, from the returns which have been before you, that on an average half a million of pigs are exported from Ireland to Great Britain annually ?—Yes.

5666. That represents a very considerable capital ?—Yes.

5667. Are you aware that large numbers of these pigs are the property of very small and poor holders in Ireland ?—I presume so.

5668. And having regard to all these facts, yet you recommend that you would try your experiment in the first instance upon Ireland, and prohibit the exportation of all pigs from Ireland ?—I should only suggest that as part of the whole scheme : that is, dealing piecemeal with the disease, and, as it were, clearing up the source from which the disease came, and then following it to the mouth of the stream, instead of beginning at the mouth and going towards the head of the stream. But so far from it being an experiment, according to my own view, I should say that it is not an experiment at all. We have the experience of dealing with other diseases to show that it is certain of success, and I should not myself consider it to be a hardship to deal with Ireland first ; for Ireland would rather get an advantage, in that it would have the first opportunity of getting rid of the disease.

5669. Do you not know where a great deal of the pig trade in Ireland comes from ; from holders who have only one or two pigs ?—I believe so.

5670. And who can hardly afford to wait until a suitable market would occur elsewhere. Any stoppage in their trade might be utter ruin to the whole of large districts in the country ?—But this system that I suggest would be rather favourable to Ireland, because it would not necessitate any interference with the export trade of Ireland at all.

5671. I do not see how that would be if you were to altogether prohibit Irish pigs landing in England. Would it not interfere with the export trade ?—I do not propose that, if Ireland is dealt with first. But if we deal with Great Britain at the same time that we deal with Ireland, I think it would be so necessary to pre-

vent the re-importation of disease into this country, that we should be obliged to prohibit from Ireland, or else allow landing only for slaughter.

5672. Why should not the experiment go on in the same way as it did in pleuro-pneumonia; why should you not let the animals be dealt with in the same way?—You may say that my whole scheme of dealing with it piecemeal is this: that you are beginning at the source of the stream, and working downwards towards the mouth of it, but to begin at all parts alike seems to me to be rather a loss of power and effort. It is better to concentrate your effort in the first instance at the source.

5673. An important witness yesterday proved that in the year 1892, 8,000 pigs were landed into the Newcastle district from Ireland, and no disease of any kind was traced to them. Do you not think that it would be a most serious thing to stop such trade as that?—I think it would be very serious indeed.

5674. Do you not think that that statement which was here given yesterday proves what you stated this morning, that there was no greater danger in the movement of pigs from Ireland into Great Britain than from one county to another?—I do not think there would be any greater danger, but I should like to point this out. I quite admit the probability that there is very little disease in Ireland, but still, as there is some disease in Ireland, and seeing that the disease appears, as I understand, occasionally in an obscure form, I think there would be considerable risk if the importation is allowed to continue, assuming that now and then some of those half million pigs which come over in the year would be diseased. If we had a considerable amount of disease in this country, that probably would be of very small importance; but supposing we completely cleared, say, Scotland and the North of England of the disease———

5675. Why should you not begin with Scotland?—I would begin with Scotland when dealing with Great Britain, because there is very little disease there.

5676. And you could perhaps more quickly get rid of it?—But then you must stop importation from Ireland into Scotland, unless you have already got rid of the disease in Ireland.

5677. Is it only a question of money as to beginning all round at the same time?—I think it is not only a question of money, but a question of effort. It is a pity to throw away effort needlessly, and to attempt to stop a stream at its mouth instead of beginning at the source, would be a waste of effort, I think.

5678. Are you aware that witness after witness here, since this inquiry began, have given it as their evidence that the best way to deal with this would be by compulsory slaughter of diseased animals, with slaughter of those in contact, and restriction upon movement of a moderate kind?—No, I am not aware of that. I have not heard the evidence.

5679. Supposing very eminent men came to that opinion, although you should be of a different opinion, you would not thereby say they were wrong?—No, certainly not. I am only expressing my own view and nothing further.

5680. Then, about this compulsory slaughter, you say it failed in 1885?—Yes.

5681. Was not that entirely in the hands of the local authorities?—Yes. It was no doubt tried under very unfavourable circumstances.

5682. You have made no estimate for Ireland?—None.

5683. Would you have the slightest idea how many pig-sties you would have to reconstruct throughout our country if you were to go upon your model?—I am afraid you would have to reconstruct cottages very often.

5684. However, you are satisfied, at all events, that whatever regulations were imposed as far as the Department in Ireland is concerned they would carry them out loyally?—Yes, certainly.

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5685. (*Sir Jacob Wilson.*) The reason why you prefer to take Ireland before Scotland in this drastic measure of dealing with swine fever is with a view of carrying out your principles of large areas, always beginning at the outside of the disease if possible?—Yes.

5686. And gradually drawing up to a small centre?—I should take Ireland before Scotland for this reason: that there is importation from Ireland into Scotland, and there is no importation from Scotland into Ireland.

5687. (*Sir W. Kaye.*) Therefore, it would not be necessary to stop any importation from Ireland into Scotland?—Not if the disease were first stamped out in Ireland.

5688. Do you not think that the whole of Ireland would be against your proposition?—I do not know.

5689. (*Sir Jacob Wilson.*) Sir William Kaye asked you why you would not follow the same lines as you adopted in pleuro-pneumonia, which were following the principles adopted by the Agricultural Department in England?—I think I mentioned before, in answer to a question, that, as regards pleuro-pneumonia in Ireland, when the Pleuro-pneumonia Act came into force in Great Britain, pleuro-pneumonia only existed in Dublin, and in no other part of Ireland, so far as was known. It was within such a narrow compass that the Irish Government were able to shut up the whole of the cattle in which there was any danger. Therefore, the risk was excessively small of sending any diseased animals over to our country; but, as regards swine fever, I believe, unfortunately, it is scattered over many counties, and it would be practically impossible for them to prohibit importation into Great Britain from those districts.

5690. But am I not right in assuming that your suggestions in this case are with reference to the future treatment of a novel kind applicable to both England and Ireland?—Yes.

5691. In the case of pleuro-pneumonia you were only desiring to extend to Ireland what was already existing in England?—Quite so.

5692. In this case you think it more important to commence with Ireland, and you would probably, under similar conditions, in pleuro-pneumonia, have preferred to have begun with Ireland also?—Yes.

5693. (*Sir W. Kaye.*) I am quite sure that nobody in Ireland would object to your beginning with Ireland providing you do not stop the traffic in cattle?—Providing you do not stop the importation of pigs.

5694. Yes?—I should not propose to stop the importation of pigs if you stamp the disease out there before we begin.

5695. (*Sir Jacob Wilson.*) There would be no necessity to stop it then?—There would be no necessity.

5696. To come back to one or two other questions which have been dealt with this morning; as to your staff,—who is to decide upon the intestines sent up to the Central Authority according to your scheme of dealing with swine fever?—The head veterinary surgeon appointed for that purpose would have to decide.

5697. Then that would require a special department and machinery to carry it out effectively?—Yes.

5698. How is that done at present with reference to lungs sent up in the case of pleuro-pneumonia?—It is done by the officers of the Board. Of course it would be impossible to obtain anyone who would do it better, if as well as they, but I take it that there would be such a very large number of intestines in swine fever to examine, that it would be impossible for them to devote the time that it would require

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to examine all these intestines which come up; they would come up by thousands.

5699. Are not those lungs practically examined by or for the officers of the Department at the Royal Veterinary College?—Yes.

5700. Do you think similar privileges could not be offered to the Board for the purposes of swine fever?—I do not know at all; that is a matter, of course, for the professional officers entirely; I am only looking at it from the administrative point of view—the amount of labour that it would entail would be exceedingly severe, and I should think more than they could possibly carry out.

5701. Am I correct in assuming that one of the reasons for your recommendation of an independent staff outside the Board of Agriculture is that your present staff is too small and practically unable to undertake the duty?—They are otherwise fully engaged, and permanent officers are hardly suitable for special campaigns of this kind. This work would entail tremendous labour, and the duty is so very severe that it is more than could be reasonably asked of them, I think.

5702. In so very important an undertaking would it not be desirable to have someone appointed at the head of that staff who has had large experience in the treatment of diseases of a similar nature?—I should not like to give any opinion on that point. I must leave that to the President of the Board to decide as to whom he would select.

5703. I do not refer to the individual, but generally as to the qualification for the appointment?—I should think, myself, what would be the better course would be, after the selection of the man who was to be the principal guide in working the details, that the selection of other persons to assist him should be to a very great extent left to him.

5704. I gather that in the proposed staff the services of inspectors who have been employed with reference to pleuro-pneumonia in which they have gained great experience, and for which they are now no longer needed, ought to be obtained?—Certainly; I should think they would be of very great value.

5705. They would be preferable to appointing all new men?—Yes.

5706. Is it not desirable that whoever has control of this subject at the Board of Agriculture ought to be in immediate and direct touch with the Veterinary Department of the Board?—Yes, I should think he should.

5707. Now, with reference to the Midlothian case, upon which a question was asked by Mr. Wardlaw Ramsay, were not the circumstances there quite exceptional?—Yes; Mr. Wardlaw Ramsay was referring to the foot-and-mouth regulations and not to pleuro-pneumonia.

5708. The action of the Board there was due to special reasons outside the real outbreak of foot-and-mouth disease?—Quite so; it was due to other points entirely outside the particular outbreak.

5709. And owing to those circumstances, and the particular time of the year when it took place, the Board, after very careful consideration, felt that it was desirable to adopt those measures?—Yes; after the most careful consideration, the measures were considered to be absolutely necessary.

5710. (*Mr. Carrington Smith.*) Would you recommend that the same veterinary surgeons should be appointed to diagnose the existence of swine fever for Ireland as well as for England?—I think not; in Ireland they have their own department and their own officials.

5711. I thought it was a misunderstanding, but that seemed to be inferred from what you stated. You spoke of Somerset as having been successful with respect to having reduced the disease within its borders. Somersetshire owed its success to slaughter, did it not?—At one time. When I say success, you must understand that I only mean comparative success, looking at the extreme difficulties. Their position is excessively difficult. They are necessarily an importing county; they cannot do without imported pigs, and considering that, I think they have had a very fair amount of success. At one time they adopted slaughter, but I think they found that it seemed rather to draw the disease from the surrounding counties that did not pay compensation into their district. They stopped slaughter in consequence of that, and practised a system of very fairly successful isolation, shutting the pigs up.

5712. Before they stopped slaughter did they not repeatedly make applications to the Board asking that slaughter should be made compulsory and universal?—I am not sure at the moment whether they did, but my impression is that they did.

5713. In any case there were questions put frequently in the House of Commons by the Somersetshire Members—by Sir Richard Paget amongst others—asking the Central Authority to take upon itself the burden which the local authority in Somersetshire had already taken upon itself?—I may say generally I do know it, although if you ask when they made an application or anything of that kind I should not be able to tell you, but I heard Sir Richard Paget mention it, and the Chief Constable spoke of it several times to me.

5714. Then a fair inference from that is, that Somersetshire would be strongly in favour of a simultaneous and compulsory system of slaughter all over Great Britain?—I do not know whether they would be in favour of a simultaneous slaughter, but they would be in favour of the principle of slaughter.

5715. (*Mr. Joseph Smith.*) You told us that in your opinion the disease comes from the west to the east. I ask it again: have you any definite information that makes you think so?—My opinion is that the general drift of the trade is in that direction.

5716. The evidence that we have had does not point to that at all; the evidence which we have had before us points to its being spread more from Bedfordshire than anywhere else?—I do not for a moment mean to say that all pigs go to the eastward, and do not come to the westward; but I think the general drift of what you may say the whole live-stock trade of this country is from the westward towards the eastward. Bedfordshire of course is rather an exceptional place; they breed a large number of special pigs, and there are a number of dealers in that county who advertise those particular pigs, which they profess to breed on their own premises; the consequence is that they send out, I think, something like 200 or 300 pigs from Bedford market every week, and they distribute them to different parts of the country. In addition to that, many of the dealers, when they have not got the pigs which the buyer asks for, will go anywhere about the country, to St. Ives, or St. Neots in Huntingdonshire, to Hitchin in Hertfordshire, or to any place and buy; and all those places, Bedfordshire, Hertfordshire, and Huntingdonshire, are all bad with the disease at the present time—there is no doubt of it—so that these dealers distribute a great deal of disease through one special trade. But I think that the general drift of the pig trade is from the west towards the east. I think that that view is supported to a great extent by the fact I mentioned just now. Take Wales, for instance; Wales, except just on the north, and in Glamorganshire, which is one of the Eastern Counties, has very little disease; the Western Counties of Wales have very little swine fever, and have had very little for years.

5717. Would there be as many pigs kept in those counties in recent years as there were formerly?—Yes, there is a very considerable pig population.

5718. The evidence we have had shows rather that they go from the Eastern Counties into Wiltshire?—I have no doubt that a good many do go in that direction; they come back to the east for killing, I have no doubt.

5719. And to Birmingham?—Yes. In the Eastern Counties they do not consume anything like the number of pigs that they feed and breed there. My suggestion of the stream from west to east is only of a very general character.

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The Witness withdrew.

[Adjourned to Tuesday next, at 10.30.

TENTH DAY.

Tuesday, 21st March 1893.

At 7, Whitehall-place, S.W.

PRESENT:

THE LORD EDMOND FITZMAURICE, IN THE CHAIR.

Sir JACOB WILSON.
Professor G. T. BROWN, C.B.
Mr. R. G. WARDLAW RAMSAY.
Mr. JOSEPH SMITH, Jun.
Mr. T. CARRINGTON SMITH.

Mr. FRANCIS A. FULFORD, *Secretary.*

Mr. JOHN DUNNE, called; and Examined.

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5720. (*Chairman.*) I THINK you are Chief Constable of the two counties of Cumberland and Westmorland?—I am.

5721. I think that you held a similar position, did you not, at Newcastle, at one time?—I did.

5722. So that you have had a very varied experience, both in town and in country, of dealing with the contagious diseases of animals, including those of swine?—I have.

5723. You are aware, of course, that the subject matter of this enquiry is how best to deal with swine fever?—Yes.

5724. Will you, in the first instance, tell us what the position in Cumberland and Westmorland is? Have you, within those two counties, any towns with an independent jurisdiction respecting the contagious diseases of animals?—Yes. There are three independent jurisdictions in the two counties; two in Cumberland and one in Westmorland. In Cumberland the Municipal Boroughs of Carlisle and Workington have separate jurisdictions, and in Westmorland the Municipal Borough of Kendal has a separate jurisdiction.

5725. Will you tell the Committee what the course of action pursued in those two counties in regard to swine fever has been during the time that you have been chief constable, especially with regard to movement, to slaughter, and to compensation?—There was no swine fever in either of those counties previous to 1887; from that time to the 29th of April, 1888, there were four outbreaks of swine fever in Cumberland; none whatever in Westmorland; three in the city of Carlisle; and none other in any part of either county. During the same period, and up to 1891, there were 26 cases of suspicion reported; that is, in certain cases, pigs were taken ill and lingered for a short time, and after death it was supposed that they were affected with swine fever; but *post-mortem* examinations were made, with the result that the veterinary surgeons who made those examinations certified that the illness from which they were suffering was not swine fever. Mr. Bell, who is the chief veterinary inspector of Cumberland and Westmorland, was called in to make an examination. He is a man of great experience and considerable ability, and he gave the different cases very careful attention and consideration. He certified that there were no symptoms of swine fever, that the animals died from indigestion or inflammation, or some disease other than that of swine fever. The particulars of all those cases to which I have referred are set out in a statement which I have here. In that statement I give, first the particulars of the four cases of actual disease, the date when they broke out, and the history of the pigs that were affected so far as could be ascertained. One of those cases is a very remarkable one, and perhaps you would like to hear the particulars connected with it, as I think it is a case which clearly shows the way in which the disease is spread from place to place.

5726. We shall be glad to hear that if you will kindly proceed.—That is the case of Mr. Paisley, of Backhouse, at Bassenthwaite, near Keswick, in Cumberland. On the 29th of April, 1888, he reported the illness of a young pig, and the veterinary inspector of the district was called in. That inspector was Mr. Young, of Cockermouth, and he certified that the pig was suffering from swine fever. Mr. Bell was also called in to make an examination in conjunction with Mr. Young, and he also certified that this particular pig did die of swine fever, and that 5 others on the same farm were suffering from that disease. On enquiry it turned out that Mr. Paisley had bought six young pigs from a pig dealer, of Bedford. At that time there were certain regulations, which I shall lay before you presently, providing that swine could only be moved into Cumberland under certain regulations. The first of which was, that a person who wanted to move swine had to make a declaration that the swine had not been within two miles of an infected place during the preceding 14 days; that they had not been exposed at any market or fair; that they had not been in contact with disease; and that they were perfectly healthy. The dealer made an application for a licence to the superintendent of police at Cockermouth to move those six young pigs from Bedford to Bassenthwaite. On enquiry the superintendent was satisfied that the declaration was filled up, and that he had no discretion to refuse the licence, and accordingly he sent the necessary licence. In due course these swine were moved to Bassenthwaite, and soon after they got there one of them was ill, and that one died. Then the veterinary surgeons examined it and the other five, and Mr. Bell and Mr. Young certified that the one which died had died from swine fever, and that the other five were suffering from that disease. The case was reported immediately to the local authority, and they directed that the five suffering from the disease should be immediately slaughtered. They were

slaughtered, and the carcases buried. They were valued at 18*s.* each, being 3*s.* more than they originally cost, and the owner was paid by the local authority a compensation of half their value, which amounted to 2*l.* 5*s.* I instructed the superintendent to carefully enquire into the particulars, with a view of ascertaining whether these pigs had been in any way exposed to the disease, and whether the conditions set out in the declaration which the dealer had made were thoroughly trustworthy. He wrote to the head of the police at Bedford, and several communications passed between them, but he was unable to get the information which I thought should be given, for the purpose of proving that those pigs had not been exposed to infection. I was so satisfied as to the importance of the case that I sent Mr. Taylor, the superintendent of police at Cockermouth, to Bedford, to personally enquire into the circumstances. I gave him certain questions in my letter which he had to answer. The questions and reports are all set out in the papers which I will lay before you. The result of his enquiry was, that he found those six pigs had been actually bought in the market at Bedford subsequent to the declaration being made. It seems that the dealer had not the pigs in his possession at the time that he declared that he had them in his possession, and that he bought the pigs in the market after he had obtained a licence, for the purpose of sending them on to Bassenthwaite. Then he also found that the pigs had been moved from a place in the immediate vicinity of an area infected with swine fever. The evidence clearly showed that the pigs, according to the opinion of Mr. Bell, were actually diseased at the time they left Bedford. I then felt bound to have the dealer summoned before the Cockermouth magistrates for making a false declaration. He appeared before the Bench, and was convicted and fined; he was fined 2*l.* and costs, and the costs amounted to a considerable sum—over 10*l.* That is an instance of how the disease was introduced into that district by the indiscriminate movement—reckless movement, I may almost call it—of pigs by a pig dealer. He made a declaration which we found on enquiry to be false, for which he was summoned and convicted. The infected place was carefully isolated and disinfected, and no further outbreak of disease took place there. That is the last case we had in the county of Cumberland. That was in 1888, nearly five years ago; and there has been no disease in Westmorland in the seven years.

5727. Do you mean that you have not had any outbreak reported since then?—We have had some suspicious cases. The total number of the suspicious cases in the seven years was 26. Eleven of these were in 1887, six in 1888, six in 1889, two in 1890, and one in 1891. The one in 1891 was nearly two years ago, and there has been no case, even of suspicion, since that one. The case in 1891 was the case of a pig which was ill at a place called Bootle, Carnforth, in the neighbourhood of Millom. The local veterinary surgeon, Mr. Glaister, of Millom, was called in, and he certified that this pig was suffering from swine fever. Mr. Bell, the chief veterinary inspector, went down and investigated the case, and he certified that it was not swine fever. The pig eventually died. Mr. Glaister reported that the pig which belonged to Mr. Harrison, of Bootle, was suffering from swine fever on the 19th June, 1891. Mr. Bell, the chief inspector of Carlisle, certified the pig to be suffering from indigestion, brought on by injudicious feeding. On the 24th July Mr. Glaister again telegraphed to the clerk of the peace that an outbreak of swine fever had taken place at Mr. Harrison's. This was found to be the same pig referred to in Mr. Glaister's previous reports. Mr. Bell was again called in, and he made a further examination and inquiry, and certified that over-feeding was the cause of death, and not swine fever, for the pig had died in the meantime. Other pigs were in the same yard, but none of them were subsequently found to be diseased. Mr. Bell considered this fact to be strong evidence in support of his certificate. That case occurred in June 1891, nearly two years ago. There has been no case whatever of even a suspicion of disease from that time to this. Of the four cases of actual disease, two were at Cockermouth, in March 1887, nearly six years ago, within a few days of each other. The diseased pigs in those cases were bought from dealers, and were traced to have come from Ireland. The third case was at Keswick, on the 30th April, 1887. The pigs in that case were bought from a dealer, and we had reason to believe that they were brought from districts where disease existed, but we failed to prove clearly that they were bought from those districts, although we had no moral doubt they were. In each of the four cases where the disease existed our system of isolation and disinfection was carried out. No pigs were allowed to be moved from the immediate neighbourhood, and the result was, that there was no spread of disease. The four outbreaks were entirely confined to the premises on which they occurred, and the isolation and disinfection was, I have no doubt, the means of preventing the spread of the disease. In the city of Carlisle, during the seven years, they had three outbreaks, which were rather extensive ones. One was among the pigs of Messrs. Carr, who are very extensive biscuit manufacturers, millers, bread manufacturers and corn merchants. They keep a large number of pigs on a farm adjacent to the city, for the purpose of eating up their offal, and so on. The manager of Messrs. Carr bought a pig about the 6th February 1882, at Edinburgh. This pig was brought from Edinburgh to Carlisle, and soon after the disease broke out. Mr. Bell, who is also the chief inspector of the local authority of the city of Carlisle, was called in, and he certified that this pig was suffering from swine fever. There were 30 other pigs in contact with this diseased animal, and they all were in good condition. Messrs. Carr, in their own interest and that of their neighbours, had all those pigs slaughtered and disposed of on their own account. The local authority was not called upon to pay any compensation. There was no further outbreak of disease in connection with that case. The premises were isolated for a certain time, some fourteen days, and thoroughly disinfected. The result in that case was similar to what I have described in the others. Another outbreak of swine fever was declared to exist on the premises of Messrs. Hetherington. This was a very serious affair. Messrs. Hetherington are the proprietors of an auction mart at Carlisle, and on the 2nd May, 1887, a pig was found to be ill at their market. A large number of pigs were there on that day for sale—pigs of every description, young pigs, store pigs, fat pigs, sows, and so on. Mr. Bell was called in, and he certified that this pig was affected with swine fever. The pig was immediately slaughtered and buried, and the other swine isolated, put in houses, &c., and after a long consultation, Messrs. Hetherington determined to have everyone of them slaughtered. There were 250 pigs in the market on that day. The owners were communicated with, and they consented to the slaughter, provided they received a fair and a reasonable remuneration for their animals; that is, that the animals should be valued, and that they should receive their fair market value. No doubt the auctioneers were interested in having the place declared free from disease, for if that had not been done, the market would have been stopped, not only for pigs, but probably for cattle, for a short time. The pig department of the auction mart is separated from the cattle market, but people could not go from one place to the other without passing through, so the probability would have been that the mart would have been stopped by the order of the Board of Agriculture. However, they had all the swine slaughtered, and they have represented strongly that they lost about 100*l.* by the transaction. They guaranteed the

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value of the pigs to their owners. They found that the carcases of many of them were in poor condition, and not fit for food, and those were worth but very little when slaughtered. The difference between their value and the amount realised was represented to be 100*l.* They put that down as a dead loss. This is the history of cases that have come under my personal cognisance.

5728. You have given us a very clear and interesting account of what has happened in your counties in the past, and I should like you now to tell the Committee what your views would be as to the best course to pursue generally in regard to the extermination of swine fever; whether in particular you are in favour of the transfer of jurisdiction (which no doubt you know has been suggested) from the county authorities to the Board of Agriculture, with the view of securing uniformity of regulation?—I am quite of opinion that if a uniform system of the slaughter of diseased pigs, and of the isolation of disinfected places, with careful disinfection, were carried out under well matured regulations, it would be successful. The regulations which I shall hand in have entirely succeeded in protecting Westmorland from disease. They have had no swine fever in that county; and I believe it is the only county in England and Wales which has been free from the disease, although there have been some counties in Scotland which have been free. In Cumberland there have been only four outbreaks of actual disease in the last seven years. I entirely attribute that state of things to the carrying out of these regulations. No swine are allowed to come into the counties except under a declaration and under well-defined and well-considered regulations. I think that if a similar system could be carried out throughout the country the disease might be extirpated in a short time; but, in order to secure uniformity in the carrying out of such a system, I think it is absolutely necessary that the control of the measures which may be necessary for stamping out the disease should be placed entirely under the direction of the Board of Agriculture. I do not think there is any feeling in the country against the transfer of the power from the local authorities to the Board of Agriculture. There may be some few instances, but I think they are very few. I think the country would be delighted to have the power placed in the hands of an authority which would have such regulations carried out as would protect the country from the losses which result from the spread of this disease. The losses are very considerable, and they might be prevented I think in a very short time by the slaughter of the diseased animals, coupled with the isolation and thorough disinfection of the infected premises and areas. I think the same arguments which were used in favour of the transfer of the power of slaughter and the carrying out of the regulations in connection with pleuro-pneumonia equally apply to the question of swine fever. There was some opposition on the part of a few authorities at the time of having the power transferred to the central authority, but the result has been found to be so satisfactory that there is one universal feeling of satisfaction now throughout the country that the disease has been stamped out, and that the farming interest is protected from the tremendous losses which were inflicted by the spread of pleuro-pneumonia. In Cumberland we had very serious losses. Within the last two years of the existence of the disease, previously to its being transferred to the Board of Agriculture, it cost the county about 10,000*l.* Cumberland is peculiarly exposed to the danger of the introduction of disease from Scotland and from Ireland; it is a county lying on the seaboard with several ports of debarkation for Irish cattle and Irish pigs. By a system of isolation and disinfection, and stringent regulations, we stamped it out over and over again, but as soon as we got rid of it it was re-introduced by diseased cattle from those districts. I speak from my own knowledge, and I am quite confident in being able to report to you that the feeling now in the country is one of great satisfaction that the disease has been so thoroughly stamped out by the Board. I think that the same feeling would result from the stamping out of swine fever under the direction of the Board of Agriculture. It never can be done otherwise. You will find if you enquire of every local authority in the Kingdom that there are hardly two of them having the same system; many of them have no regulations whatever, and they allow swine to be moved indiscriminately from infected places. If one writes to enquire whether there has been any swine fever you can hardly get a reply. It is very difficult to get the necessary information to feel satisfied in granting a license. That is illustrated strongly in the case of Bedford with regard to the dealer which I have spoken of; it was only by sending one of our own superintendents to Bedford that we ascertained the facts and discovered that a false declaration had been made. I think that there would be very little advantage in giving the power of slaughter and additional powers of stamping out the disease without the security of uniformity, vigilance and efficiency.

5729. Have you considered whether it would be desirable in addition to what you have suggested, to introduce a system, especially in urban districts, of compelling pig dealers to take out licenses upon certain conditions?—I believe that would be a security. If the pig dealer was bound to provide a license and to enter in a diary the swine that he received, stating where they came from, and when sold where they went to, of course we could trace them, and it would induce the dealer to be extremely careful in sending into other districts swine that might not be free from disease or that he had not had in his possession for a certain time.

5730. It has been suggested by some witnesses that you might carry that a step further, and compel pig keepers to take out a license with a view of enforcing better regulations with regard to the condition of the pig-sties, the places where they are, the manner in which they are cemented, and so on, and that the license should be forfeited if these places were not kept in accordance with certain conditions?—There would no doubt be a security in that, but I think it would be very difficult to carry it out, especially with cottagers.

5731. I was talking more of urban districts at this moment?—There are not very many people keeping pigs in towns except dealers, although a poor man may have a pig, and at hotels and inns they have pigs. But I think the duty of disinfection should lie with the authority more than with the owners. It is very difficult to get places kept clean and free from the germs of disease. The expense to the farmer and the time it takes a man to clean and disinfect would be so serious that I found it very difficult to get it done in connection with pigs and cattle and dairies.

5732. (*Sir Jacob Wilson.*) I believe your experience with regard to dealing with diseases of animals extends over a considerable period?—It does.

5733. Under your administration very stringent measures were adopted in Cumberland and Westmorland at the time of the outbreak of cattle plague?—Yes.

5734. And with success?—Yes.

5735. And the same success, I gather, has attended your dealings with foot-and-mouth disease and pleuro-pneumonia?—Yes.

5736. So far as pleuro-pneumonia is concerned you have had unusual difficulties to contend with I believe in Cumberland?—We have.

5737. And that is due in a great measure to the peculiar position of Cumberland in connection with the English seaboard and the east of Ireland?—Yes.

5738. Will you be good enough to tell the Committee as far as you remember what are the public

markets and auction marts within the counties of Cumberland and Westmorland?—There are two very extensive marts in the city of Carlisle, one at Penrith, one at Wigton, two at Cockermouth, one at Whitehaven, one at Appleby, and two at Kendal. At all these places swine are extensively sold.

5739. Are those markets and marts under careful inspection?—Yes, they are. I believe that the proprietors are very anxious to have all the requirements of the Board of Agriculture strictly carried out, and many alterations have been made in consequence of the suggestions of the inspectors from time to time.

5740. Are you aware whether they have all paved or cemented floors?—At one time they had not, but I believe they all have now, except one cattle mart at Kendal, which is held in a public street.

5741. Then, in a case where markets and fairs are held in the public streets, which it is obviously impossible to thoroughly cleanse, there would always be a source of danger?—Always. There is also a public cattle market at Carlisle, on the Sands.

5742. That is, of course, held on grass?—No, it is on rough, gravelly ground. The auction marts are paved and bricked.

5743. Do your local authorities schedule all known centres of the disease?—Yes, with the exception of parts of the adjoining counties. No swine can be moved into Cumberland from any other district in England, Wales, or Scotland except under declaration and licence. The adjoining counties of Dumfriesshire, Roxburghshire, Wigtownshire, Northumberland, the North and West Ridings of Yorkshire and Lancashire, within a seven miles area of the borders of the counties, and they are excepted from those restrictions. It oftentimes happens along the borders that a farmer has holdings in each county, and very often for the purposes of feeding or breeding, a farmer wishes to move his swine from one county to another just over the border. The great object in making these restrictions, and the one which I have always found to be of the greatest importance, is to have the maximum safeguards with the minimum inconvenience and losses. I have always found that if we can get the farmers and those interested to act with us and to co-operate we are more successful than if we do things roughly without considering their interest.

5744. Are you aware that a considerable amount of swine fever has existed in the West Riding of Yorkshire?—Yes.

5745. But, as a matter of fact, Cumberland has not suffered from the permission within the seven miles radius to admit pigs from the West Riding of Yorkshire?—Not at all. Careful inquiries are made, a discretion is left with me by the local authority to withdraw the privilege if any danger exist, and until a meeting of the authority is called to consider any fresh outbreak. If we find an outbreak of disease has taken place within the seven miles radius, and there is any danger of animals being moved from it into Westmorland or Cumberland, then we should refuse to allow animals to come until the local authority had met and considered the particular case.

5746. Could you tell the Committee what special precautions you take in cleansing places which have been the centres of disease?—In the first place, after the diseased animals and those which have been in contact are slaughtered, we get the place thoroughly scraped and cleansed, and if there is any of the surface ground broken, and likely to be a receptacle for the germs of disease, any stagnant water lying about, or bad drains, we have the ground all picked up and opened out. The whole place is thoroughly covered over with slacked lime. After that it is all washed out with a mixture of carbolic acid. Then, if it is a shed or house, we shut it up as close as possible, and burn sulphur inside and fumigate it. We do not allow any pigs or animals to go into the infected houses for about 14 days. We consider that a sufficient disinfection and isolation; in fact, we have found it sufficient, for in none of those instances have there been cases of a second outbreak.

5747. Do you make it a rule that the origin of all outbreaks shall be traced where possible?—Yes.

5748. Is that done through your police or through the veterinary inspectors?—It is done through myself and the superintendents. Each superintendent of police is an inspector under the local authority, and the local authority have left the administration of the regulations entirely in my hands. Inquiries are made through the superintendents with the view of tracing the origin of the disease if possible.

5749. Have you ever found it necessary to give your police any extra remuneration for this kind of work?—Nothing beyond the actual expenses incurred. If a man incurs expense while engaged on this duty, if he is away from his home and has to travel, he is allowed a sufficient sum to cover his subsistence and to pay his actual travelling or other expenses; but in addition to that they receive no remuneration.

5750. I gather from that that you do not recommend it as a further incentive to the detection of disease?—We have not found it necessary, but I think a small sum of money would be an incentive to men who work hard and who use their best exertions to carry out this additional labour.

5751. Have you ever found it useful in dealing with the cattle plague or other outbreaks of cattle disease?—In the cattle plague time men were on duty day and night. I had two frontiers, one from Alston to Allonby, and the other from the Dent Mountains above Kirkby Lonsdale to Arnside.

5752. Will you give the Committee an idea of the extent of those two frontiers?—The distance from Alston to Allonby and the roads covered is about 75 miles, and the distance from the Dent Mountains to Arnside about 35. We had men on duty along these frontiers, the northern frontier and the southern frontier, day and night. These men were away from their homes, their duty was very severe, and they were allowed at the rate of about twenty-one shillings a week extra for this extra work. Nothing was allowed to pass the points without being disinfected, and the plague never got within these frontier lines.

5753. Then I take it that you had to have an additional force for the purpose?—Yes, in Cumberland the local authority gave me 100 additional men, and the Westmorland authority gave me 45.

5754. Now, in the Bassenthwaite case, where you stated that you traced the origin of the disease to Bedford, may I ask whether that was to the town or to the county of Bedford?—To the town of Bedford. The diseased swine came from the county district, but in the immediate neighbourhood of the town—a distance of about two miles from Bedford—where the disease had existed for some time. The breeder of the pigs lived about two miles from Bedford, and he brought those pigs into the market for sale. They were purchased at the Bedford market by the dealer, who obtained the licence.

5755. And he sent them direct from the borough to Cumberland?—Yes.

5756. Have you any reason to believe that there is much fraudulent concealment of disease in the case of outbreaks of swine fever?—I am afraid that there is concealment, but it is more, I think, from the desire of the owners to get the best price they can for their pigs before they declare the disease. They become so indifferent in some districts that they do not seem to attach any importance to it. They take the diseased swine into the market and sell them, and they are moved about the country without any safeguards whatever.

5757. I wish to ask you whether, in your opinion, swine fever is regarded as a very serious form of disease by the farmers and cottagers of Cumberland?—Yes, in those districts where they

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have been free from the disease, they consider that their interests are well taken care of in protecting them from the introduction of the disease.

5758. Cumberland being more or less a dairy county, and a cattle breeding county, I presume that a considerable number of pigs are bred within it?—A large number.

5759. You have mentioned various markets in Cumberland and Westmorland of considerable importance, where pigs are sold in large numbers; are you aware of any lairs existing in conjunction with those markets, but not under the control of the market authorities?—I am aware of none not under the control of the market authorities. It sometimes happens that swine which are brought in on a particular market day may not be all sold, and the authority of the market to which they are taken has a place where they can be kept till the following sale.

5760. In the case of Carlisle market, do the pigs come by cart, or by road, or by rail?—They come by road, rail, and cart. The young swine are brought in carts for perhaps twenty miles or more. A great number come from Northumberland and Scotch districts, and a great number are brought in by railway from different parts of the county. Pigs, especially store pigs, are imported extensively now from the Cumberland and Westmorland markets into the south. One of the results of the exemption from disease is that it has increased the value of store pigs in these counties.

5761. And that is due to the confidence which the public in other counties have as to the freedom of disease among pigs in Cumberland and Westmorland?—It is so entirely.

5762. Are there any special provisions which you put in operation for the cleaning of dealers' carts?—The carts that are used for carrying fat swine from the markets to the railway stations, or to the slaughterhouses of butchers, are swept and washed, but beyond that there is nothing more done, excepting in cases of disease, when everything in contact is properly disinfected.

5763. Are the lairs to which you have referred, where pigs can be kept over a week for the next week's market, frequently belonging to public-houses?—Some of them are, but they are more generally in conjunction with auction mart premises. The auctioneers have houses in which to keep the animals, and they provide food and so on, but there are some lairs in connection with public-houses.

5764. Under those conditions, would it not be possible for disease to break out during the week, and for pigs to be sold without the authorities receiving any information on the subject?—It would be possible, no doubt.

5765. Are you aware whether such has ever taken place?—Not in my experience in Cumberland or Westmorland during the last seven years.

5766. In your opinion is the disease easily detected?—Mr. Bell, the chief veterinary inspector, says he has no difficulty in detecting the disease. Other veterinary surgeons differ. The best evidence of that is that in several of these 26 cases the local veterinary surgeons were of opinion that the pigs which were ill showed signs of swine fever, but when they died, and a *post-mortem* examination was made by Mr. Bell, in conjunction with a local veterinary surgeon, they agreed that the disease was attributable to other causes than swine fever.

5767. Now with regard to the outbreaks which you have had in Cumberland and Westmorland, have you always been able to trace their origin?—Up to a certain point. The only successful case of tracing the origin of disease was that at Bedford; in the other cases the pig dealer said: "I bought these pigs "in Lancashire," but when we tried to find at what market he bought them, whether at Ulverston, or Lancaster, or Preston, or some other adjacent market, then we could not get satisfactory evidence.

5768. Have you satisfied yourself, however, that it was from sources outside the counties of Cumberland and Westmorland that the disease came?—Entirely. Everyone of those four outbreaks was traceable to a source which had come in from other districts; which had been smuggled in.

5769. I gather that you regarded Scotland and Ireland as the two chief sources of danger to Cumberland and Westmorland?—In connection with pleuro-pneumonia it was so, but I believe there has not been so much swine fever among Irish pigs as in Scotland and England. We are standing in a dangerous position with regard to Scotland. A great number of diseased swine have gone out of Scotland, and I have heard they have introduced the disease into other districts.

5770. All pigs coming from the West of Scotland into England must, I presume, pass through Carlisle?—Yes, by railway; but several of them go through without stopping. The extensive outbreak at Messrs. Carr's, which I have described, was introduced by a pig from Edinburgh, and the outbreak at Messrs. Hetherington's auction mart was introduced by a Scotch pig also.

5771. Have you any instance upon which you can put your finger, of disease in Cumberland which originated from Irish pigs?—Yes, I believe one of the Cockermouth outbreaks was introduced by Irish pigs. There were two outbreaks in 1887 at Cockermouth, and one of these was introduced by some pigs which came from Ireland. They were debarked at Whitehaven, they were bought at Whitehaven Market and taken to Cockermouth. The second outbreak, some short time after the first, was, I believe, entirely traceable to some contact which had taken place between the pigs where the disease first broke out, and where it broke out the second time.

5772. Can you give us any idea of the number of pigs that would be sent from Ireland weekly to Carlisle?—A large number, but they are not so numerous as they used to be. There used to be a very large trade in Irish pigs, but nothing like the number that used to come.

5773. Do those pigs come as fat pigs or as stores?—Both. There are a great many stores which are debarked at Silloth and taken up by train to Carlisle.

5774. Where do those pigs chiefly land?—At Silloth and Whitehaven.

5775. From what ports in Ireland do they come?—Dublin, Londonderry, Larne, and Belfast.

5776. Then I presume some would come from Stranraer?—Stranraer is the Scotch port from Larne. That is the shortest sea route to England. They go to Glasgow and Edinburgh, and some to Carlisle.

5777. In spite of the number of Irish pigs coming from Ireland, you have no reason to believe the disease has been contracted from Irish pigs in Cumberland since 1887?—No.

5778. I gather that you consider there is no feeling in the country generally against placing the authority in future for dealing with swine fever in the hands of the Board of Agriculture?—No, I do not think there is any general feeling against it; on the contrary, I believe there is a very strong feeling on the part of all intelligent persons and people who have the welfare of the country at heart in favour of placing the whole matter in the hands of the Board of Agriculture.

5779. Do you think that some of that feeling may be due to the expectation that the Board will consequently have to pay the cost instead of the local authorities?—Of course that would follow. I do not think there is a very strong feeling regarding the question of cost. The cost of carrying out the law in slaughtering both pigs believed to be diseased and those in contact with them is only small, because it is not generally carried out. It is not like the case of pleuro-pneumonia, when there was a tremendous cost falling upon the rates. I think the great feeling in favour of having this power taken from the local

authority and put into the hands of the Board of Agriculture is entirely owing to the security that would be thereby given to the property of the farmers and the cottagers.

5780. Am I correct in assuming that that favourable feeling is also due, in some measure, to the success which has attended the action of the Board of Agriculture in dealing with pleuro-pneumonia and foot and mouth disease?—Yes, to a very considerable extent.

5781. I would now just ask you one question as to your opinion about the basis of compensation: Have you any suggestions to offer as to the principle upon which compensation should be paid for pigs slaughtered?—I think the value of pigs should be clearly ascertained in the first instance by impartial and competent valuers, and that there should be some compensation to a larger extent than the law at present provides.

5782. As matters stand at present the maximum amount which can be given for an animal slaughtered as an animal in-contact is 4*l.* What increase would you recommend?—I should recommend the full value of the swine if they were fairly valued by an impartial person. I think that if the swine are taken from the owner and slaughtered for the good of the country the owner ought to receive the fair value of them.

5783. In the event of a high-pedigreed pig being slaughtered, would you put any limit?—I would. I think the pedigreed animals should be put on the same footing as the ordinary animals. A good fat pig is worth 6*l.* or 7*l.*

5784. Then I gather from you that it would be the slaughter value of the pig at market that you would recommend?—Yes, previous to its becoming diseased.

5785. Do you think it would not be wise to put some limit as a maximum?—No doubt it would if it could be safely done. I think it should not exceed say 6*l.* or 7*l.* Prices are good now. Bacon is very dear; it is 11*d.* to 1*s.* a pound. Hams are very dear, and I believe pork was sold in the market at Carlisle last Saturday at a price higher than for several years.

5786. What proportion of that value would you give for a pig slaughtered in consequence of having the disease?—If you are satisfied that they have the disease, I think two-thirds of the value would be a very fair sum. I think the owner should be made to feel that he runs considerable risk by indiscriminately introducing the disease, if he will not take sufficient precautions to ascertain that he is getting healthy pigs.

5787. As it stands at present you are aware, no doubt, that he gets one half?—Yes. In the case of Bassenthwaite the pigs were valued at 5*l.* 10*s.*, and he only received 2*l.* 5*s.* In one of the cases at Cockermouth there were 11 healthy swine slaughtered that were in-contact. They were valued at 11*l.*, and the owner only received 5*l.* 10*s.*, which made a considerable difference. There is a feeling in the country that if pigs are slaughtered and they are fit for food and are taken into the market the owner should be protected against any loss.

5788. I presume it is open to the owner of a pig to slaughter and salvage his own pig?—Yes, Messrs. Carr did that at Carlisle. They had 30 pigs slaughtered and sold.

5789. Would not that power be an ample protection to the owner?—There is a considerable expense attending the slaughter of 10 or 20 pigs, and there may be some risk. It depends upon the season of the year. At this season there would be no risk in getting the full value of fat swine, but in hot weather there would be some; if a great number were turned into the market they might have to be sold at a loss.

5790. I gather that your experience is that disease is more likely to break out amongst large herds of swine rather than among individual pigs?—Yes.

5791. (*Mr. Carrington Smith.*) Do you slaughter only diseased pigs and not in-contact pigs?—We take every one, in-contact as well as those diseased.

5792. Do you slaughter the in-contact pigs in cases of outbreak?—Yes.

5793. There would be no salvage to the owner in the case of diseased pigs, would there?—No.

5794. From their carcases, I mean. The question has been put by Sir Jacob Wilson that the owner could protect himself by having his own pigs slaughtered?—Those would be the contact pigs, not the diseased pigs.

5795. How would that be. You say that your local authorities determined to slaughter diseased pigs and in-contact pigs?—Yes.

5796. Would you allow the owner the option to slaughter the in-contact pigs if he chose?—Yes.

5797. You would do so?—Certainly.

5798. You said that you think the country itself would be very much in favour of a uniform system of management from an Imperial centre?—Yes.

5799. And you of your own knowledge can say that though you in Cumberland and Westmorland now pay nothing because you have no disease, you would be willing to put your hands into your pockets and help your neighbours in less fortunate districts?—Certainly, from a national point of view. The people are so satisfied of the success of the system in connection with pleuro-pneumonia that they think it would be a great thing for the country at large if the farmers could be protected from the losses which result from the spread of swine fever.

5800. Although it would cost you more?—It would cost the county a little more, but it would fall upon the country at large instead of upon any particular district.

5801. Now you have spoken with respect to the difficulty of diagnosis; in case the Imperial authority took over the management, would you put the diagnosis into the hands of the Imperial authority or into the hands, we will say, of the Chief Inspector?—I think it should be in the hands of the Board of Agriculture in order to make it a successful system. I think, also, that it would be a great advantage if there was a competent veterinary surgeon responsible in every county, or for a group of three or four adjoining counties.

5802. The appointment being in the hands of the Board?—Certainly.

5803. The police under Imperial authority might do just what they are doing now under the local authorities?—Precisely.

5804. You say that your two counties are now largely exporting counties?—Yes.

5805. In consequence of your having cleared yourselves?—Yes.

5806. Were you ever importing counties in connection with swine to any great extent?—The two counties have always been importing counties for cattle and swine, but not now to the same extent for swine as we were.

5807. You have told us how disease came to you, from an infected place, out of the county of Bedford, through the market of the borough of Bedford?—Yes.

5808. After you had traced that, did you prohibit all importation from the county of Bedford; or did you allow pigs to come with a declaration as before? We refused all applications for a certain time.

5809. Do you take them now from Bedfordshire?—We do, but not without inquiry. I had a recent case where a dealer at Bedford applied for a license, and on enquiry I found that there had been swine fever in the neighbourhood of the place from which he wanted to move the pigs and so I refused the license myself. He then threatened me with an action, and I told him that he could go on and bring his action; that I had exercised the discretion vested in me, and that I positively refused to grant the license.

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5810. Was that from the borough or from the county ?—From the borough.

5811. Although your local regulations do not prohibit it ?—They do not prohibit it, but they give me a discretion, and in the exercise of that discretion if I find there is a certain danger I refuse to grant a license.

5812. Then I may take it that no pigs can come from Bedford borough to you now ?—Not from Bedford nor from any other district in the kingdom where disease exists. If there is any disease, under these regulations we refuse to grant a license for the removal of swine out of the districts in which the disease exists, or from within two miles of the infected place.

5813. Exactly, but you might have a great many clean places in an infected county ; would you take them from a clean place in Bedfordshire ?—Yes, if they were a certain distance from the disease. Recently I granted a license for the removal of some black pigs from Shropshire to the neighbourhood of Cockermouth, but I had previously enquired as to when there was disease and where the disease existed, and I satisfied myself that there was no danger before granting the license.

5814. You have said before, and I think very properly, that in districts where disease existed the people made up their minds that they were obliged to have it, just as they are obliged to have the poor, always with them ?—Yes.

5815. You really think that is so ?—I do ; I think there is a feeling that as the authorities won't endeavour to stamp out the disease they must resign themselves to its ravages.

5816. Do you think it would be advisable to put pig-sties under supervision just as cow-sheds are put under supervision ?—I do. I think it would be a great advantage if they were put under supervision for the purpose of having a system of disinfection carried out.

5817. Under what authority, the sanitary authority or the local or executive authority ?—I think the local authority is the best of the two. They were under the local authority up to a certain time, but under the Act of 1886, the cow-sheds were transferred from the local authority to the sanitary authority.

5818. Which is effective or non-effective—which ?—Non-effective ; they do nothing in some districts.

5819. Then I take it you would go so far as to transfer the working of the Cow-sheds Act to the executive ?—If the Board of Agriculture want to have the public protected from disease, I believe that the most effectual way to do that would be to put all the work into the hands of the local authority which should be responsible for the administration of the Contagious Diseases (Animals) Acts, subject to the inspection of an Inspector of the Board of Agriculture.

5820. (*Chairman.*) In the answers you have just given you have referred to the local authority as distinct from the sanitary authority. Would you kindly tell us what you mean by the local authority and what you mean by the sanitary authority ?—I mean that previously to the Act of 1886 coming into force, the local authority was the Court of Quarter Sessions. Since the establishment of county councils, the County Council is the local authority in counties, and the municipal authority is the local authority in boroughs. In 1886 the transfer was made from the local authority of the county to the boards of guardians. The local authority and the sanitary authority are two distinct authorities. There may be a few members who are on both, but they are two distinct authorities altogether. The sanitary authority for the administration of the Dairy and Cowsheds Order do the work through their sanitary inspector. The work has not been done so effectively as it was done under the old authority, and I think it would be far better for the public interest to have the supervision of cow-sheds and dairies, and also of pig-sties, under the local authority of the county, instead of under the sanitary authority of the boards of guardians.

5821. (*Mr. Carrington Smith.*) Who, of course, would look after the health of the animals living in these cow-sheds, pig-sties, or stables, or whatever they might be ?—Yes.

5822. Then, as I understand it, you recommend that any public control over the buildings in which animals, liable to contagious diseases, are kept, should be subject so far as their sanitary arrangements are concerned, to the control and inspection of the executive of the various authorities, and not under the Rural and Urban Sanitary Authorities, as now ?—I think it would be much more advantageous for the public interest if it were so.

5823. Then I take it you consider that if proper supervision was held over the health of the animals which live in these buildings, human beings would be also sufficiently protected with respect to their health ; that is to say, if the conditions under which the animals lived were healthy, there would be no nuisance to the surrounding inhabitants. Is that so ?—To a certain extent it would be so. No doubt all accumulations of filth and dirt engender disease (such as typhoid fever and other diseases) among human beings. I think that inspection of the pig-sties and other dirty places would have a beneficial effect on the general health of the community.

5824. You rather confused what I had in my mind by having stated in an answer to a previous question that you think it should be the duty of the sanitary authority to disinfect. I think possibly you would like to correct that, because you have just now said that you wish to abolish the control of the sanitary authorities ?—What I mean is that I think the work of disinfection and inspection should be done under the direction of the executive committee of the county authority.

5825. And not the sanitary authority ?—That is so.

5826. You would like to make that correction then ?—Yes ; but I think it is what I previously explained.

5827. In any case whether the public be satisfied or not, there should be some supervision by the sanitary authority with respect to the sanitary arrangements. You are quite convinced in your own mind that all buildings in which contagious diseases of animals are liable to break out—that is, stables, cow-sheds, and pig-sties—should be under the supervision of the executive of the local authority ?— I am quite of opinion that they should be.

5828. And that the executive of the local authority should be the parties to bear the cost of the disinfection ?—That they should be responsible subject to the supervision of an Inspector of the Board of Agriculture.

5829. I think I understood you to recommend that dealers in pigs should keep a register of purchases and sales as one of the conditions included in their licenses ?—Yes.

5830. Auctioneers also ?—Yes.

5831. I must say myself that there has been considerable difficulty in tracing the sales taking place in auction yards. Our executive in Staffordshire has had difficulty in getting information from the auctioneers ; in fact, the auctioneers have absolutely refused to give us the names of the parties ?—I have experienced similar difficulties myself in tracing cattle that we found to be diseased, and cattle which had introduced pleuro-pneumonia. The difficulty arose from the auctioneer not having kept a diary giving a description of the cattle, and the places they came from, with certain other particulars. I have always found, however, that they were anxious to give information. I do not think they conceal the facts with any fraudulent intention ; it is more through the

want of system; the animals come in in a hurry, and they are sold off in a short time, and auctioneers have not an opportunity of making up their diaries.

5832. May I take it, then, that you ask for a system of licenses for pig-dealers and auctioneers?—I think it would be a great safeguard if you had such a system.

5833. But not for pig-keepers?—The pig-keeper would know where his pig came from as a rule. Those people know whom they have bought the pigs from, and I think it would be a pity to impose restrictions unnecessarily upon these people. They dislike very much having to write in particulars and to give the date when they received a pig, where it came from, and where it goes to. No doubt it would be useful information; but I think the register by the seller, that is by the auctioneer or by the pig dealer, would answer every purpose.

5834. You stated that none of the four outbreaks of which you have spoken spread from the places in which the original outbreak took place?—None.

5835. How far did you make the infected place?—Simply the immediate premises. If there were any premises adjoining in which there were pigs, then we made that an infected area. There was no circle declared. We carried out a system of isolation for some 14 days. I placed additional policemen round the place, and had them on duty day and night, and formed, as it were, a perfect cordon.

5836. That cordon not being drawn at a certain fixed distance?—No; according to circumstances it varied. We did not take in an area where no danger existed. If there were no pigs within, say, a quarter of a mile or less of the infected place, we did not make it an infected area; we contracted it as much as possible.

5837. Had there been a lot of pigs within a quarter of a mile, would you have made that place an infected area?—Yes; we would then have taken advantage of the Order in Council and applied to the Board of Agriculture to authorise the local authority to form a half-mile circle.

5838. In the case of that outbreak in Messrs. Hetherington's sale-yard, the information apparently came to you before any sale of pigs had taken place; because, as I understand, the whole of the 250 pigs in the sale yard were slaughtered?—Some had been sold, but they had not been removed from the auction-yard.

5839. You exercised your powers as the local authority to have the diseased pigs slaughtered at Hetheringtons; but, as I understood, you did not exercise your powers as the local authority to have the in-contact pigs slaughtered; but the auctioneers had them slaughtered out themselves?—Hetheringtons immediately got the consent of the owners, and had them slaughtered out at once upon their own responsibility.

5840. I take it that supposing the local authority had met the same day, the local authority would have taken upon themselves to do what Hetheringtons did?—I have no doubt the Carlisle authority would have done so.

5841. (*Mr. Joseph Smith.*) Have you any reason to suspect that there is any disease in the county that you do not hear of?—I do not think there is. I think if there was disease we would hear of it. There may be concealed disease, but we have had no reported disease or suspected disease since 1891.

5842. We have had a good deal of evidence which tends to show that there is a good deal of disease which is not reported, but you do not think there is in your two counties?—I do not think there is. I have a system of supervision, if there are any sudden deaths heard of they are reported, and then the particulars are investigated by the veterinary inspector, and so, if there were any disease, I think it would be discovered. The owners of animals that are ill are bound by the Act of 1878 to report to the police. That to a great extent prevents concealment.

5843. Who have you in your county on the look-out for disease?—The superintendent of police generally inquires of the auctioneers, and the pig dealers, and the farmers. They are constantly moving from place to place.

5844. Are the police employed at all if they hear anything?—In the course of their duties, if they hear of any disease, they report it to their superintendent and he reports it to me, and I call in the veterinary inspector, and he goes down and makes inquiry.

5845. Have you a veterinary inspector in each police district, or each Petty Sessional Division?—Yes. All the veterinary surgeons in Cumberland are now veterinary inspectors under the Contagious Diseases (Animals) Act, and there is one chief inspector, Mr. Bell, of Carlisle.

5846. How are all these inspectors paid?—While engaged on any public duty they are paid at the rate of one guinea a day, and half-a-guinea for half a day, in addition to their travelling expenses.

5847. Then they are not appointed by the local authority. The local authority do not appoint special men; they employ anyone who is in the district?—The special man is Mr. Bell, of Carlisle, and in case of any doubt, or in case of suspicion, we send the stomach, or other parts of the intestines, to the Board of Agriculture. Sometimes a veterinary surgeon has been called in, in a doubtful case, from Edinburgh. The chief inspector, Mr. Bell, of Carlisle, is a man of considerable experience, and I have found him, during my 40 years' service, always thoroughly trustworthy. In the time of the cattle plague, and foot-and-mouth disease, and pleuro-pneumonia, if it had not been for his services we should have found it extremely difficult to have carried out the law.

5848. In any case of suspected swine fever you send him to report on the case and to ascertain whether it is swine fever or not?—Yes; that is our practice.

5849. You do not take the judgment of these local men?—No. There was the case at Millom, which I told you about, where the local veterinary surgeon certified that it was swine fever. Mr. Bell went down and made a careful examination, and he certified that it was not swine fever; in proof of that opinion the pigs in the vicinity did not become diseased.

5850. You told us just now that a good many pigs came to Carlisle from Newcastle, I think?—Not a large number from Newcastle. More go from Carlisle to Newcastle than come from there. A good many come from Scotland, and some come from Ireland. They principally come from different districts in Cumberland and Westmorland.

5851. When they come from Scotland are they obliged to have a licence?—They would be now, except from Dumfriesshire, Roxburghshire, and Kirkcudbright; two of those counties largely adjoin the borders of Cumberland. In those counties there is no disease. The Cumberland authority have exempted them from the restrictions, but if disease broke out we could immediately refuse to admit swine from them until the authority had met.

5852. Do you think a system of registration and licensing could be carried out with little men and cottagers, and the people who keep one or two pigs?—It would be difficult to get it carried out by cottagers. They are generally people who do not understand the filling up of a form of register. It might be done—with difficulty.

5853. Do you not think they would think it very irksome and interfering?—They would. There is nothing they dislike more than to be obliged to fill up a declaration or a form of any sort. They used to invariably go to a lawyer to consult him as to whether they would incur any responsibility in doing so, and then that meant that they had to pay a fee for his opinion. But the policeman in the district generally advises them now.

Mr. John Dunne.

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5854. Do you not think if dealers had to keep a register it might lead to a good deal of wrong entering and deceit?—It might; but I think it would be a great security in having the register kept by the pig-dealer, and the auctioneer. I think if you want to trace the origin of disease, the security of a register is the only means you can have to refer to. I think there would be a great advantage in it.

5855. You do not think that would interfere with the trade of the country?—No, I do not. I think at first they would grumble about it a little, as they do not like having any restrictions. I have always found that, whatever entails the trouble of making a declaration and obtaining a licence, is not liked, but when they come to see the benefit of it, they submit cheerfully to it.

5856. (*Mr. Wardlaw Ramsay.*) To what do you attribute the absolute immunity of Westmorland from disease?—I attribute the absolute immunity of Westmorland from the disease to the fact of having one police force for the two counties, and having a thoroughly efficient system carried out. If disease breaks out in Cumberland it is immediately reported, and then steps are taken to prevent its spread. Beginning with the cattle plague, some 28 years ago, it was proved very clearly that the system of isolation and slaughter and disinfection in Cumberland indirectly protected Westmorland from the plague. It has also protected it from pleuro-pneumonia, foot and mouth disease, sheep scab, and swine fever.

5857. Is there any port in Westmorland where pigs are disembarked?—The nearest port is Barrow.

5858. Is that in Westmorland?—No, Lancashire, not far from Westmorland.

5859. Can you give me any idea of the number of pigs that are kept in these two counties?—I could not give you the exact number, but there is a very large number. The pigs are paying better now than they used.

5860. Are there a great many imported?—There are. Only the other day I granted a licence for some black pigs to come out to Shropshire, and there are a great many store pigs brought from Ireland and Scotland.

5861. What part of Scotland is it where these pigs principally come from?—Dumfriesshire, Roxburghshire, Kirkcudbrightshire, and I believe some come out of the Lothians.

5862. Do you take them from the Lothians now?—Under licence and declaration.

5863. But you did not know from what part of Scotland those diseased pigs came from, did you—you gave two instances, I think, of pigs from Scotland?—They came from Edinburgh.

5864. Now, as to the boroughs. Do they work in harmony with the local authority of the county?—Yes. There is a rule in existence that whatever regulations the county authority make, the authority of Carlisle shall make a similar regulation.

5865. Is it a mutual agreement?—It is a mutual agreement, but if they fail to carry out that agreement, then we prohibit the movement of animals out of the city into the county.

5866. Of course, it would have added very much to your difficulties if you had not had this mutual understanding?—It would, no doubt.

5867. Could you tell me to what extent you carry this disinfection of the diseased premises, which seems to have been so successful?—Where disease is certified to exist, the first step we take is to slaughter the diseased animal; we have the carcase buried in a trench six or seven feet deep and cover it with lime and fill it up. Then we proceed to disinfect the premises where the disease exists; that is to say, first of all we pick up the stones if it is paved; if there are any holes which are receptacles for water we clean them out and pick the ground up. We remove the channels; and we have the lofts all cleaned and swept and scraped. Then it is all covered with whitewash; the floors are covered with slaked lime and all the wood-work is whitewashed.

5868. The wood-work is not burnt, is it?—Some of it is. If it is old wood-work and eaten by insects we cut it out; we pull it down in fact, and put up new places instead of the old ones.

5869. Do you remove any of the flooring to any extent?—Yes, we pick it all out.

5870. What do you do with that?—We burn it as far as we can and then bury it. The next process is to wash it all over with a mixture of carbolic acid. Then we fumigate; we stop all the holes in the roof, in the walls, and in the doors, and fumigate with sulphur, and we keep the place closed up for a period of about 14 days.

5871. (*Professor Brown.*) You have had a very large experience in dealing with outbreaks of cattle plague and animal diseases generally, have you not?—Yes.

5872. Since the cattle plague of 1865, I think?—Yes.

5873. And you find that it answers perfectly well to employ your own men as inspectors?—In conjunction with the veterinary inspectors, for reporting disease and for carrying out any rules or regulations; but where there is any technical, professional opinion required, we then have the advantage of the chief inspector.

5874. You take an interest in the work really?—I always have done.

5875. And probably your men are imbued with your notions about the matter?—I hope they are. I frequently confer with them. If there is an outbreak of disease I go down into the district and I call together the officers who are on duty in the immediate neighbourhood and have a personal conference with them and go fully into the whole question, and give them distinct instructions for their guidance and government, &c.

5876. You have one chief inspector appointed for your whole district?—Yes.

5877. That is all that the Act compels you to appoint, I believe?—That is all that we are absolutely bound to do.

5878. And you have not been called upon by the Privy Council or by the board to appoint any more?—Not by the board nor by the Privy Council, but the local authority have appointed all the veterinary surgeons in the county as inspectors under the Contagious Diseases (Animals) Act.

5879. They are really appointed?—They are.

5880. And without salary, so that you can consult them when necessary and pay them by fees?—Just so; they are paid at the rate of one guinea a day and their actual expenses.

5881. Has that system worked perfectly well?—I cannot say that it has. I have had considerable difficulty in connection with the reports which the local inspectors make. Some have been very doubtful, and Mr. Bell, when he has gone down and made the *post-mortem* of an animal that died, has found that the local veterinary inspector was wrong and that no contagious disease existed.

5882. Then, according to your experience, it answers best to have one reliable veterinary surgeon in the district, and to employ the police for the general work?—That is the system which we found to be most successful in connection with all our diseases, cattle plague, pleuro-pneumonia, foot-and-mouth disease, sheep-scab, and swine fever.

5883. You have no difficulty with any conflict of jurisdictions as a rule?—None whatever, I am glad to say. The local authorities of Carlisle, Workington, and Kendal act most cordially with the authorities of the county.

5884. And, in fact, your district is very favourably situated altogether in regard to the police action to the agreement between the boroughs and your county, and to the general procedure?—Yes.

5885. So that, as far as your own work is concerned, you can manage to keep fairly free from disease ?—We have done so hitherto, under Providence.

5886. But you are aware, of course, that other counties are not so favourably situated ?—I am quite aware of that.

5887. And that they frequently fail to keep free from disease ?—Entirely through their own fault, because they wont make efficient regulations or carry out a good system of isolation and disinfection. Their apathy lets in the disease.

5888. Or possibly from conflict of jurisdiction ?—Possibly ; I believe that has done a good deal in some districts to cause the spread of disease.

5889. Would you say that, notwithstanding the success that you have had yourself, with the aids that you have mentioned, it would be better for the whole of the country that the work should be done by a central department ?—I am quite of opinion that if you want to protect the country from the tremendous losses resulting from those diseases the work should be carried out uniformly under the direction of the central authority.

5890. And you say that with a full knowledge of something like 30 years' experience of the successful action of your own local authority ?—Precisely. My opinion is based upon the practical experience we have had in that line.

5891. Would you propose to use the existing machinery which local authorities have as far as possible, even when there is a central authority undertaking the work of exterminating the disease ?—If it is necessary to have a local authority, you could not have a better one than the existing authority, the county council ; but I think it would be much better for the public protection and the public interest if the work was entirely under the direction of the Board of Agriculture.

5892. But the local authority must provide means of giving notice of outbreaks of disease ?—Certainly, similarly as they are now bound to act in connection with pleuro-pneumonia, or other diseases under the Acts.

5893. Would you allow them to retain all the powers which they retain in regard to pleuro-pneumonia ?—I would.

5894. But the whole management of outbreaks of disease should be in the charge of the central authority ?—I am quite of opinion that if you want the work done efficiently, and the county properly protected from disease, the system of slaughter, disinfection and isolation, should be entirely under the direction of the central authority.

5895. Is it your opinion that under that system the board might rely on the assistance of local authorities, and on the aid of the police generally ?—I think so. They have received that assistance in connection with pleuro-pneumonia with very few exceptions. There is always some little difficulty in isolated places.

5896. Speaking generally, you think they might rely on that very important aid ?—I am quite confident they might.

5897. (*Chairman.*) I suppose you would admit that, owing to local circumstances, your two counties are rather exceptionally easy to defend against inroads of other counties, because your county boundaries are lines of hills with very few roads through them ; are you not very exceptionally situated in that way?—No, we are more exposed than many other counties to the introduction of disease from the seaboard from the communication with Scotland, and on the southern side through Lancashire and Yorkshire. I think it is entirely through the system of vigilance and supervision and disinfection and the carrying out thoroughly of efficient police regulations that the county is protected. Practically what the Board of Agriculture does in connection with pleuro-pneumonia we do in connection with swine fever.

5898. You mentioned the Irish pigs just now ; have you had any special trouble from Irish importation ?—We have had two outbreaks. Two of the four outbreaks that I have specially mentioned were caused by Irish pigs which were debarked at Whitehaven. Those pigs were taken inland to Cockermouth, about 15 miles from Whitehaven.

5899. On the whole, what is your experience, so far as you have had any, of the condition in which vessels bringing over Irish pigs arrive ?—Generally they have been very careful during the last few years in having the vessels disinfected, and if they are disinfected for cattle the same thing would be a safeguard against the introduction of diseased pigs.

5900. Therefore, you do not think that, on the whole, the fact that you have this Irish importation is a very great additional source of trouble to you owing to the careful manner in which disinfection is carried on in the Irish ports ?—It is so with regard to pigs, but with regard to the cattle it is somewhat different.

5901. (*Mr. Carrington Smith.*) When you were speaking of the registration of licences in connection with auctioneers and dealers I take it that you were confining the registration of their dealings to the time during which we were having the disease suppressed, and that you were not regarding it as a standing regulation ?—After the suppression of the disease that might be dispensed with, and then in any Order imposing such restrictions there might be a provision made that, in the event of a further outbreak of disease, they should be required to keep a register again. I think it is always a pity to impose restrictions which are not absolutely required.

5902. Then your recommendation comes to this, that if the Imperial authority did take it over and attempt to stamp out the disease during the time of the trial, dealers and auctioneers should be required to register all their purchases and sales ?—Yes.

5903. And that power should remain in existence to be exercised in the future if necessary ?—Yes.

5904. But should be dropped when the country was cleared of disease ?—Precisely.

5905. There is just one question with respect to the expenses in connection with the disinfection and the partial reconstruction of premises of which you have spoken ; at whose expense was the disinfection and reconstruction done ?—At the expense of the county. It did not cost the occupier a penny.

5906. Not when you took up the flooring and put in the drains ?—No ; we did it at the public expense.

5907. (*Chairman.*) Is there anything you wish to add to the evidence you have already given ?—No, but I should like to hand these documents in. They contain particulars of the four outbreaks I have mentioned, particulars of the 26 suspected cases, and particulars of three cases at Carlisle ; also the particulars of the Bedford case. Among these papers are the regulations of the local authority and the form of declaration and licence (*handing in documents*).

The Witness withdrew.

[Adjourned.

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TABLE showing the Number of Pigs, as returned at the Dates of Collection of the Agricultural Returns, in each Year from 1886 to 1892 inclusive, in each County of Great Britain, in the Channel Islands, Ireland, and United Kingdom.

SUMMARY.

	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND	1,882,698	1,940,507	2,018,420	2,118,385	2,355,760	2,461,185	1,828,542
WALES	204,887	223,170	231,365	240,741	258,175	270,082	197,302
SCOTLAND	133,890	135,646	154,559	151,677	159,674	157,506	112,015
TOTAL for GREAT BRITAIN	2,221,475	2,299,323	2,404,344	2,510,803	2,773,609	2,888,773	2,137,859
ISLE OF MAN	3,699	3,980	3,543	4,144	4,897	4,350	2,754
JERSEY	4,976	5,134	5,844	6,288	7,618	7,007	5,354
GUERNSEY, &c.	3,882	4,035	4,112	4,082	5,637	4,858	4,043
IRELAND	1,263,133	1,408,485	1,397,800	1,380,548	1,570,279	1,367,776	1,115,888
TOTAL for UNITED KINGDOM	3,497,165	3,720,957	3,815,643	3,905,865	4,362,040	4,272,764	3,265,898

COUNTIES.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND.							
Bedford	28,660	27,566	28,085	30,282	33,958	38,347	27,321
Berks	31,373	30,467	30,940	32,392	35,371	36,919	27,667
Buckingham	33,327	32,534	33,089	35,372	38,952	41,284	29,739
Cambridge	41,347	44,953	47,764	49,179	55,511	60,331	44,676
Chester	59,742	64,866	64,509	67,752	77,464	78,356	54,971
Cornwall	69,622	75,700	65,219	75,055	91,452	89,117	67,883
Cumberland	22,512	26,029	27,924	28,312	31,717	27,794	17,061
Derby	33,027	33,086	34,371	35,574	36,190	42,214	28,810
Devon	91,991	100,185	96,739	107,475	123,227	120,216	87,402
Dorset	47,827	52,073	53,749	58,016	63,556	67,564	51,418
Durham	9,350	10,909	11,862	12,461	14,758	14,805	9,936
Essex	89,541	87,935	90,595	95,277	101,749	110,673	89,942
Gloucester	65,202	64,842	70,937	72,769	81,094	85,518	61,946
Hants	60,978	61,351	65,591	72,019	77,837	85,626	68,404
Hereford	25,688	23,924	24,795	28,210	30,040	31,296	22,417
Hertford	28,523	28,367	29,738	30,194	33,103	36,133	27,160
Huntingdon	18,459	18,117	19,282	20,581	20,997	23,019	18,270
Kent	56,825	54,678	58,454	63,655	66,659	72,683	60,756

Table showing the Number of Pigs, as returned at the Dates of Collection of the Agricultural Returns, &c.—continued.

COUNTIES.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND—*continued.*							
Lancaster	42,822	46,725	47,397	50,090	56,802	50,432	37,371
Leicester	24,323	23,828	24,059	25,590	28,537	28,845	20,322
Lincoln	88,936	92,547	96,550	100,078	107,702	111,639	86,409
Middlesex	10,967	10,571	10,091	10,766	11,667	12,702	13,389
Monmouth	16,072	15,452	16,527	16,558	17,590	19,849	13,472
Norfolk	88,919	89,436	97,413	95,670	105,007	118,477	90,418
Northampton	30,624	29,551	30,121	33,433	37,502	38,398	26,241
Northumberland	11,422	12,154	13,380	14,573	14,277	14,942	10,553
Notts	24,358	24,257	25,878	28,247	32,333	32,112	23,328
Oxford	34,324	33,054	35,535	37,594	44,110	46,288	32,072
Rutland	2,652	2,490	2,866	2,433	2,989	2,904	2,072
Salop	56,339	57,759	61,428	65,048	74,025	77,385	53,372
Somerset	104,988	116,956	123,901	128,799	137,849	144,070	106,655
Stafford	48,569	49,978	50,119	53,240	59,471	61,750	42,399
Suffolk	121,866	123,564	130,887	132,950	147,543	158,448	130,808
Surrey	25,172	24,157	25,238	26,837	27,822	28,632	25,337
Sussex	41,064	41,307	42,501	45,528	46,822	46,868	37,167
Warwick	38,853	37,092	38,357	40,196	45,835	48,876	33,078
Westmorland	4,210	4,731	5,014	5,450	5,979	5,005	2,790
Wilts	63,779	66,422	69,541	72,729	77,008	79,084	62,613
Worcester	37,742	33,695	36,398	38,138	44,785	47,282	33,838
York, East Riding	42,060	46,322	51,092	50,188	61,400	64,998	43,280
York, North Riding	42,710	48,990	51,618	51,714	64,042	65,613	42,866
York, West Riding	65,933	71,887	78,866	77,961	91,028	94,691	62,913
TOTAL for ENGLAND	1,882,698	1,940,507	2,018,420	2,118,385	2,355,760	2,461,185	1,828,542
WALES.							
Anglesey	15,013	16,317	17,366	17,694	20,028	20,213	13,646
Brecon	8,497	8,864	8,848	9,081	9,723	9,844	6,935
Cardigan	21,523	23,512	23,307	24,992	25,489	25,330	19,293
Carmarthen	30,080	31,746	32,474	35,068	36,558	37,464	28,614
Carnarvon	19,817	22,236	23,729	24,176	26,747	27,439	22,552
Denbigh	21,956	25,238	27,022	27,434	29,310	32,029	22,922
Flint	12,990	15,164	16,758	16,848	19,008	20,008	13,792
Glamorgan	15,530	15,396	15,293	16,721	18,024	19,373	13,719
Merioneth	8,728	9,524	10,414	10,244	10,049	10,381	7,961
Montgomery	20,827	22,626	23,485	23,176	25,614	28,945	19,299
Pembroke	24,153	26,763	26,684	29,192	31,095	32,732	24,222
Radnor	5,773	5,784	5,985	6,115	6,530	6,324	4,847
TOTAL for WALES	204,887	223,170	231,365	240,741	258,175	270,082	197,302

Table showing the Number of Pigs, as returned at the Dates of Collection of the Agricultural Returns, &c.—continued.

COUNTIES.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
SCOTLAND.							
Aberdeen	8,612	8,896	11,410	10,432	12,061	12,588	7,377
Argyll	4,080	4,421	5,065	4,981	4,831	4,567	3,339
Ayr	13,051	14,219	14,958	15,084	16,285	15,520	12,305
Banff	3,255	4,133	4,130	3,790	4,306	4,199	2,011
Berwick	3,938	3,976	4,690	4,969	4,974	4,996	3,724
Bute	780	775	1,072	880	906	856	616
Caithness	1,563	1,341	1,655	1,910	1,923	1,821	1,409
Clackmannan	1,673	1,684	1,930	2,021	1,772	2,119	1,198
Dumbarton	932	965	976	1,051	1,083	1,065	775
Dumfries	10,819	11,653	13,676	13,584	14,034	12,435	8,287
Edinburgh	6,754	5,389	5,885	6,177	6,888	7,377	5,748
Elgin, or Moray	2,671	2,562	3,289	3,030	3,391	3,414	1,997
Fife	5,687	5,551	6,308	6,223	6,669	6,728	4,681
Forfar	6,420	6,368	7,125	6,934	7,547	7,489	5,820
Haddington	2,186	1,970	1,842	2,090	2,220	2,198	1,668
Inverness	3,289	2,996	3,513	3,680	3,809	3,832	2,792
Kincardine	2,392	2,322	3,140	2,756	3,138	3,050	2,153
Kinross	445	403	571	493	520	459	374
Kirkcudbright	6,490	7,058	7,927	7,359	7,729	7,658	5,743
Lanark	8,320	6,638	8,333	7,953	7,957	7,332	4,666
Linlithgow	1,332	1,427	1,809	1,831	1,547	1,763	1,124
Nairn	607	586	702	800	788	851	490
Orkney	3,084	3,956	4,985	4,449	4,587	5,216	2,396
Peebles	800	860	917	945	876	786	453
Perth	8,405	8,006	9,467	9,108	9,631	9,615	7,258
Renfrew	1,374	1,505	1,592	1,406	1,541	1,453	921
Ross and Cromarty	5,547	5,217	6,087	5,777	6,359	6,579	4,371
Roxburgh	3,591	3,701	3,961	4,108	4,286	3,919	3,320
Selkirk	403	408	486	511	469	480	408
Shetland	3,415	3,277	3,212	3,152	3,129	3,143	3,082
Stirling	1,775	2,025	2,343	2,157	2,188	2,241	1,881
Sutherland	1,037	978	1,051	1,028	1,132	1,297	1,028
Wigtown	9,163	10,380	10,452	11,008	11,093	10,460	8,600
TOTAL for SCOTLAND	133,890	135,646	154,559	151,677	159,674	157,506	112,015
TOTAL for GREAT BRITAIN	2,221,475	2,299,323	2,404,344	2,510,803	2,773,609	2,888,773	2,137,859
Isle of Man	3,699	3,980	3,543	4,144	4,897	4,350	2,754
Jersey	4,976	5,134	5,844	6,288	7,618	7,007	5,354
Guernsey, &c.	3,882	4,035	4,112	4,082	5,637	4,858	4,043
Ireland	1,263,133	1,408,485	1,397,800	1,380,548	1,570,279	1,367,776	1,115,888
TOTAL for UNITED KINGDOM	3,497,165	3,720,957	3,815,643	3,905,865	4,362,040	4,272,764	3,265,898

APPENDIX, No. 2.

TABLE showing the Number of Swine reported by the Inspectors of the Local Authorities to have been Attacked with Swine Fever in each County of Great Britain, in each Year from* 1886 *to* 1892 *inclusive. (See Note.)*

SUMMARY.

	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND - - - -	33,938	40,205	30,884	25,222	27,995	29,997	13,151
WALES - - - - -	583	838	536	290	668	1,705	268
SCOTLAND - - - -	508	930	821	373	429	647	538
TOTAL - - -	35,029	41,973	32,241	25,885	29,092	32,349	13,957

COUNTY.*	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND.							
Bedford - - - - -	329	758	542	1,106	829	181	554
Berks - - - - -	529	915	558	363	329	267	252
Buckingham - - - -	664	795	647	1,156	259	345	438
Cambridge (ex. Isle of Ely) -	668	908	311	370	1,017	746	145
Chester - - - - -	538	859	612	188	382	833	147
Cornwall (ex. Isles of Scilly) -	65	89	286	65	70	16	9
Cumberland - - - -	—	19	6	—	—	—	—
Derby - - - - -	696	703	493	578	157	578	248
Devon - - - - -	984	617	411	425	259	296	390
Dorset - - - - -	1,018	624	720	651	300	156	255
Durham - - - - -	490	176	224	66	142	222	64
Essex - - - - -	3,803	1,808	2,193	960	1,340	3,531	856
Gloucester - - - -	461	1,104	1,010	913	1,752	1,456	637
Hants (ex. Isle of Wight) -	1,254	1,254	736	661	656	400	844
Hereford - - - -	64	39	81	72	55	25	—
Hertford - - - -	303	632	699	835	750	708	163
Huntingdon - - - -	793	818	367	947	723	310	81
Kent (ex. London) - -	1,916	1,485	1,163	1,168	1,003	430	410
Lancaster - - - -	1,098	1,179	1,061	869	1,124	1,610	837
Leicester - - - -	441	412	410	234	155	149	103
Lincoln, Parts of Holland -	439	242	64	354	66	59	70
„ Parts of Kesteven -	91	197	168	261	6	50	3
„ Parts of Lindsey -	232	263	260	242	157	70	126
London - - - - -	165	154	370	176	416	401	124
Middlesex (ex. London) -	833	714	796	700	655	1,332	362
Monmouth - - - -	150	182	189	264	186	145	125
Norfolk - - - - -	910	2,327	1,288	2,289	1,064	1,394	823
Northampton (ex. Soke of Peterborough).	616	1,964	1,171	964	675	195	190
Northumberland - - -	68	22	8	58	61	53	55
Notts - - - - -	411	407	371	323	127	370	35
Oxford - - - - -	679	827	1,583	1,401	633	219	120
Rutland - - - -	3	52	53	6	6	79	22
Salop - - - - -	560	785	568	90	540	1,664	233
Somerset - - - -	2,201	1,834	1,062	482	1,387	525	212
Stafford - - - - -	1,150	1,425	1,289	1,034	1,268	2,292	678
Suffolk - - - - -	2,667	3,672	1,950	595	2,073	2,814	348
Surrey (ex. London) - -	294	501	499	212	297	306	314
Sussex, Eastern Division -	245	229	263	178	66	315	121
Sussex, Western - - -	131	815	231	129	166	45	86
Warwick - - - -	676	752	1,166	979	800	725	240
Westmorland - - - -	—	—	6	—	—	—	—
Wilts - - - - -	1,185	1,898	1,250	717	1,351	843	605
Worcester - - - -	365	991	569	251	929	605	154

Note.—This Table having been compiled from weekly returns, the figures given include the results for 52 weeks, or, in the years 1887 and 1892 for 53 weeks.

* Counties for the purposes of the Contagious Diseases (Animals) Acts.

Number of Swine Attacked with Swine Fever in each County of Great Britain, &c.—continued.

COUNTY.*	1886.	1887.	1888.	1889.	1890.	1891.	1892.
ENGLAND—*continued.*							
York, East Riding	537	356	441	78	289	541	491
„ North Riding	271	551	444	60	549	611	80
„ West Riding	2,574	3,172	2,163	1,243	2,482	1,764	1,030
Isle of Ely	283	620	111	425	335	271	33
Soke of Peterborough	88	59	21	84	37	10	5
Isle of Wight	†—	†—	†—	†—	72	40	27
Isles of Scilly	‡—	‡—	‡—	‡—	‡—	—	—
TOTAL	33,938	40,205	30,884	25,222	27,995	29,997	13,151
WALES.							
Anglesey	35	17	40	13	12	4	3
Brecon	—	15	11	40	29	—	—
Cardigan	25	35	—	—	—	—	1
Carmarthen	—	—	—	—	—	—	7
Carnarvon	23	65	119	38	51	112	45
Denbigh	92	125	41	51	101	360	14
Flint	6	53	25	5	83	185	32
Glamorgan	370	294	244	134	229	306	94
Merioneth	—	—	—	—	—	6	8
Montgomery	32	230	21	9	93	732	64
Pembroke	—	4	35	—	70	—	—
Radnor	—	—	—	—	—	—	—
TOTAL	583	838	536	290	668	1,705	268
SCOTLAND.							
Aberdeen	30	67	28	—	—	4	—
Argyll	—	—	—	23	—	1	—
Ayr	167	14	212	17	37	70	—
Banff	—	—	—	—	16	—	—
Berwick	45	9	6	—	—	1	28
Bute	—	—	—	—	8	—	—
Caithness	—	—	—	—	—	—	—
Clackmannan	—	—	—	—	—	—	—
Cromarty	—	—	—	—	—	—	—
Dumbarton	—	—	—	—	—	—	—
Dumfries	—	15	19	—	—	17	—
Midlothian	119	570	78	254	63	255	314
Elgin, or Moray	—	—	—	—	—	—	—
Fife	—	13	1	7	2	1	—
Forfar	16	63	24	9	4	8	5
Haddington	—	—	—	—	23	80	—
Inverness	—	19	—	—	—	—	—
Kincardine	—	5	21	—	—	—	6
Kinross	—	—	—	—	—	—	—
Kirkcudbright	13	8	—	—	—	—	—
Lanark	32	36	112	6	263	152	2
Linlithgow	—	35	—	—	—	—	2
Nairn	—	—	—	—	—	—	—
Orkney	—	—	—	—	—	—	—
Peebles	58	—	—	—	—	—	—
Perth	3	9	4	2	—	44	14
Renfrew	—	61	10	—	—	14	99
Ross	—	—	—	—	—	—	—
Roxburgh	—	6	13	—	—	—	—
Selkirk	—	—	—	—	—	—	2
Shetland	—	—	—	—	—	—	—
Stirling	—	—	—	—	—	—	14
Sutherland	—	—	—	—	—	—	—
Wigtown	25	—	293	55	13	—	52
TOTAL	508	930	821	373	429	647	538

† Included with Hants. ‡ Included with Cornwall.

APPENDIX, No. 3.

TABLE showing the Number of Pigs as returned upon the 4th June in the Years 1892 *and* 1891 *in each County of Great Britain, in the Channel Islands, in Ireland, and the United Kingdom, with a Summary for England, Wales, Scotland, Great Britain, the Isle of Man, the Channel Islands, Ireland, and the United Kingdom, together with a Statement of the decrease per cent. of the Number returned in* 1892 *as compared with* 1891.

SUMMARY.

	1892.	1891.	Decrease.	Decrease per Cent.
England	1,828,542	2,461,185	632,643	About 25
Wales	197,302	270,082	72,780	27
Scotland	112,015	157,506	45,491	29
TOTAL FOR GREAT BRITAIN	2,137,859	2,888,773	750,914	26
Isle of Man	2,754	4,350	1,596	37
Jersey	5,354	7,007	1,653	24
Guernsey, &c.	4,043	4,858	815	16
Ireland	1,115,888	1,367,776	251,888	18
UNITED KINGDOM	3,265,898	4,272,764	1,006,866	24

COUNTIES.	1892.	1891.	Decrease.	Decrease per Cent.
ENGLAND.				About
Bedford	27,321	38,347	11,026	29
Berks	27,667	36,919	9,252	25
Buckingham	29,739	41,284	11,545	28
Cambridge	44,676	60,331	15,655	26
Chester	54,971	78,356	23,385	30
Cornwall	67,883	89,117	21,234	24
Cumberland	17,061	27,794	10,733	38
Derby	28,810	42,214	13,404	32
Devon	87,402	120,216	32,814	27
Dorset	51,418	67,564	16,146	24
Durham	9,936	14,805	4,869	33
Essex	89,942	110,673	20,731	18
Gloucester	61,946	85,518	23,572	28
Hants	68,404	85,626	17,222	20
Hereford	22,417	31,296	8,879	29
Hertford	27,160	36,133	8,973	25
Huntingdon	18,270	23,019	4,749	21
Kent	60,756	72,683	11,927	16

Table showing the Number of Pigs as returned upon the 4th June in the Years 1892 *and* 1891, *&c.*—continued.

COUNTIES.	1892.	1891.	Decrease.	Decrease per Cent.
ENGLAND—*continued.*				About
Lancaster	37,371	50,432	13,061	26
Leicester	20,322	28,845	8,523	30
Lincoln	86,409	111,639	25,230	22
Middlesex	13,389	12,702	* —	—
Monmouth	13,472	19,849	6,377	32
Norfolk	90,418	118,477	28,059	23
Northampton	26,241	38,398	12,157	31
Northumberland	10,553	14,942	4,389	30
Notts	23,328	32,112	8,784	27
Oxford	32,072	46,288	14,216	30
Rutland	2,072	2,904	832	28
Salop	53,372	77,385	24,013	31
Somerset	106,655	144,070	37,415	26
Stafford	42,399	61,750	19,351	31
Suffolk	130,808	158,448	27,640	11
Surrey	25,337	28,632	3,295	12
Sussex	37,167	46,868	9,701	21
Warwick	33,078	48,876	15,798	32
Westmorland	2,790	5,005	2,215	44
Wilts	62,613	79,084	16,471	21
Worcester	33,838	47,282	13,444	28
York, East Riding	43,280	64,998	21,718	33
„ North Riding	42,866	65,613	22,747	35
„ West Riding	62,913	94,691	31,778	34
TOTAL FOR ENGLAND	1,828,542	2,461,185	632,643	25
WALES.				
Anglesey	13,646	20,213	6,567	32
Brecon	6,935	9,844	2,909	30
Cardigan	19,293	25,330	6,037	24
Carmarthen	28,614	37,464	8,850	24
Carnarvon	22,552	27,439	4,887	18
Denbigh	22,922	32,029	9,107	28
Flint	13,792	20,008	6,216	31
Glamorgan	13,719	19,373	5,654	29
Merioneth	7,961	10,381	2,420	23
Montgomery	19,299	28,945	9,646	33
Pembroke	24,222	32,732	8,510	26
Radnor	4,347	6,324	1,977	31
TOTAL FOR WALES	197,302	270,082	72,780	27

* There was in this county an increase of 687 in 1892.

Table showing the Number of Pigs as returned upon the 4th June in the Years 1892 *and* 1891, *&c.*—continued.

COUNTIES.	1892.	1891.	Decrease	Decrease per Cent.
SCOTLAND.				About
Aberdeen	7,377	12,588	5,211	41
Argyll	3,339	4,567	1,228	27
Ayr	12,305	15,520	3,215	21
Banff	2,011	4,199	2,188	52
Berwick	3,724	4,996	1,272	25
Bute	616	856	240	28
Caithness	1,409	1,821	412	23
Clackmannan	1,198	2,119	921	43
Dumbarton	775	1,065	290	27
Dumfries	8,287	12,435	4,148	33
Edinburgh	5,748	7,377	1,629	22
Elgin, or Moray	1,997	3,414	1,417	41
Fife	4,681	6,728	2,047	30
Forfar	5,820	7,489	1,669	22
Haddington	1,668	2,198	530	24
Inverness	2,792	3,832	1,040	27
Kincardine	2,153	3,050	897	29
Kinross	374	459	85	19
Kirkcudbright	5,743	7,658	1,915	25
Lanark	4,666	7,332	2,666	36
Linlithgow	1,124	1,763	639	36
Nairn	490	851	361	42
Orkney	2,396	5,216	2,820	54
Peebles	453	786	333	42
Perth	7,258	9,615	2,357	24
Renfrew	921	1,453	532	37
Ross and Cromarty	4,371	6,579	2,208	34
Roxburgh	3,320	3,919	599	15
Selkirk	408	480	72	15
Shetland	3,082	3,143	61	19
Stirling	1,881	2,241	360	16
Sutherland	1,028	1,297	269	20
Wigtown	8,600	10,460	1,860	18
TOTAL for SCOTLAND	112,015	157,506	45,491	29
TOTAL for GREAT BRITAIN	2,137,859	2,888,773	750,914	26
Isle of Man	2,754	4,350	1,596	37
Jersey	5,354	7,007	1,653	24
Guernsey, &c.	4,043	4,858	815	16
Ireland	1,115,888	1,367,776	251,888	18
UNITED KINGDOM	3,265,898	72,764	1,006,866	24

APPENDIX, No. 4.

TABLE showing the Number of Outbreaks of Swine Fever, reported by the Inspectors of the Local Authorities in each County of Great Britain, for the Years 1891 *and* 1892. (*See Note.*)

SUMMARY.

	1891.	1892.
England	5,197	2,616
Wales	343	87
Scotland	55	45
Total	5,595	2,748

COUNTY.*	1891.	1892.
ENGLAND.		
Bedford	36	105
Berks	39	28
Buckingham	51	50
Cambridge (ex. Isle of Ely)	111	28
Chester	143	36
Cornwall (ex. Isle of Scilly)	2	4
Cumberland	—	—
Derby	173	77
Devon	58	90
Dorset	12	18
Durham	59	12
Essex	272	105
Gloucester	181	106
Hants (ex. Isle of Wight)	84	120
Hereford	3	—
Hertford	60	30
Huntingdon	40	21
Kent (ex. London)	75	60
Lancaster	503	255
Leicester	50	31
„ Parts of Holland	9	14
„ Parts of Kesteven	5	1
Lincoln, parts of Lindsey	40	39
London	19	13
Middlesex (ex. London)	95	44
Monmouth	31	25
Norfolk	194	79
Northampton (ex. Soke of Peterborough)	34	41
Northumberland	15	15
Notts	72	13
Oxford	15	13
Rutland	15	3
Salop	344	81
Somerset	73	40
Stafford	648	237
Suffolk	162	29
Surrey (ex. London)	41	26
Sussex, Eastern Division	16	18
„ Western „	8	6
Warwick	145	47
Westmorland	—	—
Wilts	158	101
Worcester	182	60
York, East Riding	114	69
„ North Riding	150	25
„ West Riding	599	382
Isle of Ely	52	13
Soke of Peterborough	6	3
Isle of Wight	3	3
Isles of Scilly	—	—
Total	5,197	2,616

COUNTY.	1891.	1892.
WALES.		
Anglesey	3	1
Brecon	—	—
Cardigan	—	1
Carmarthen	—	1
Carnarvon	43	18
Denbigh	62	4
Flint	33	10
Glamorgan	109	30
Merioneth	1	6
Montgomery	92	16
Pembroke	—	—
Radnor	—	—
Total	343	87
SCOTLAND.		
Aberdeen	1	—
Argyll	1	—
Ayr	15	—
Banff	—	—
Berwick	1	4
Bute	—	—
Caithness	—	—
Clackmannan	—	—
Cromarty	—	—
Dumbarton	—	—
Dumfries	1	—
Midlothian	16	14
Elgin, or Moray	—	—
Fife	1	—
Forfar	3	4
Haddington	3	—
Inverness	—	—
Kincardine	—	3
Kinross	—	—
Kirkcudbright	—	—
Lanark	10	2
Linlithgow	—	1
Nairn	—	—
Orkney	—	—
Peebles	—	—
Perth	2	1
Renfrew	1	4
Ross	—	—
Roxburgh	—	—
Selkirk	—	1
Shetland	—	—
Stirling	—	6
Sutherland	—	—
Wigtown	—	5
Total	55	45

Note.—This Table having been compiled from weekly returns, the figures given for 1891 include the results for 52 weeks, while those given for 1892 include the results for 53 weeks.

* Counties for the purposes of the Contagious Diseases (Animals) Acts.

APPENDIX, No. 5.

TABLE showing the Number of Swine in Great Britain at the date of Collection of the Agricultural Returns, the Number of Outbreaks of Swine Fever, and the Number of Swine attacked by the Disease; together with the Total Number of Swine Slaughtered Healthy or Diseased, or which died of Swine Fever, in each Year from 1879 *to* 1892 *inclusive.*

Year.	Number of Counties from which Swine Fever was Reported.	Number of Fresh Outbreaks.	Number of Swine Attacked.	Number of Healthy Swine Slaughtered on Infected Premises.	Diseased Swine.		Total Number of Swine Slaughtered Healthy or Diseased, and of Swine which Died of Swine Fever.	Number of Swine at Date of Collection of Agricultural Returns.
					Killed.	Died.		
1879	53	2,765	17,074	2,779	13,643	3,416	19,838	2,091,559
1880	50	1,936	9,865	1,811	7,961	1,940	11,712	2,000,842
1881	56	1,717	7,994	1,681	6,217	1,781	9,679	2,048,090
1882	56	2,983	14,763	3,682	11,903	2,799	18,384	2,510,402
1883	53	2,400	11,225	3,527	8,950	2,257	14,734	2,617,757
1884	54	1,877	8,939	2,427	6,364	2,372	11,163	2,584,391
1885	70	7,926	38,798	9,450	27,478	9,919	46,847	2,403,380
1886	63	6,813	35,029	13,722	26,745	7,438	47,905	2,221,475
1887	71	7,238	41,973	10,353	24,831	14,502	49,686	2,299,323
1888	69	6,449	32,241	9,753	16,111	13,288	39,152	2,404,344
1889	61	4,841	25,885	8,045	13,188	10,782	32,015	2,510,803
1890	64	5,076	29,092	9,019	12,844	12,785	34,648	2,773,609
1891	66	5,595	32,349	8,689	15,229	14,112	38,030	2,888,773
1892	66	2,748	13,957	5,461	7,124	5,789	18,374	2,137,859

APPENDIX, No. 6.

TABLE showing the Total Number of Pigs, and Number of Pigs affected with Swine Fever, Imported into the United Kingdom, in each Year, from 1879 *to* 1892 *inclusive.*

Year.	Total Imports of Pigs.*	Number Affected with Swine Fever.	Year.	Total Imports of Pigs.*	Number Affected with Swine Fever.
1879†	51,441	1,044	1886	21,394	3
1880	51,127	416	1887	21,976	1
1881	24,459	157	1888	24,443	42
1882	15,657	49	1889	25,384	8
1883	38,726	12	1890	4,037	44
1884	26,561	6	1891	522	—
1885	16,494	1	1892	3,848	48

* Compiled from the weekly returns furnished by the Board of Customs.

† 1879 was the first complete year since Swine Fever was, by Order of Council, declared to be a contagious disease for the purposes of the Contagious Diseases (Animals) Act, 1878.

APPENDIX, No. 7.

TABLE showing the Amount of Compensation paid by Local Authorities for Swine Slaughtered on account of Swine Fever in Great Britain, for Seven Years, ended 1892.

Year.	Diseased Swine.	Healthy Swine in contact.	Total.
	£. s. d.	£. s. d.	£. s. d.
1886	18,507 3 7	10,816 11 8	29,323 15 3
1887	15,836 16 –	6,541 7 11	22,378 3 11
1888	8,710 2 4	3,968 7 7	12,678 9 11
1889	6,452 12 10	2,247 7 4	8,700 – 2
1890	5,530 7 8	2,799 2 3	8,329 9 11
1891	6,232 1 2	2,955 7 6	9,187 8 8
1892	3,735 3 10	1,647 12 1	5,382 15 11
Total for Seven Years £.	65,004 7 5	30,975 16 4	95,980 3 9

Statistical Branch, Board of Agriculture.

APPENDIX, No. 8.

Handed in by Sir *William Kaye.*

TABLE, showing the Number of Pigs in Ireland in each Year from 1881 *to* 1892 *inclusive.* (*Taken from Registrar General's Returns.*)

Years.	Pigs.	Years.	Pigs.
1881	1,095,830	1888	1,397,825
1882	1,430,128	1889	1,380,670
1883	1,348,364	1890	1,570,366
1884	1,306,550	1891	1,367,712
1885	1,269,092	1892	1,115,888
1886	1,263,142		
1887	1,408,456	Difference in Numbers between 1891 and 1892.	251,824 Decrease.

APPENDIX, No 9.

Handed in by Sir *William Kaye.*

RETURN, showing the Number of Pigs and the Number of Outbreaks of Swine Fever in each County in Ireland in 1892.

PROVINCE OF ULSTER.

COUNTY.	TOTAL Number of Pigs.	Number of Farms or other Places upon which Fresh Outbreaks have been reported to have taken place during the Year 1892.
Antrim	50,130	1
Armagh	24,716	—
Cavan	45,372	5
Donegal	30,611	—
Down	39,869	2
Fermanagh	19,270	2
Londonderry	34,874	—
Monaghan	26,925	—
Tyrone	39,224	—
TOTAL	310,991	10

PROVINCE OF MUNSTER.

COUNTY.	TOTAL Number of Pigs.	Number of Farms or other Places upon which Fresh Outbreaks have been reported to have taken place during the Year 1892.
Clare	33,398	—
Cork	118,992	10
Kerry	49,447	10
Limerick	42,150	17
Tipperary	70,879	6
Waterford	33,070	13
TOTAL	347,936	56

PROVINCE OF LEINSTER.

COUNTY.	TOTAL Number of Pigs.	Number of Farms or other Places upon which Fresh Outbreaks have been reported to have taken place during the Year 1892.
Carlow	20,957	6
Dublin	10,285	5
Kildare	11,758	17
Kilkenny	35,675	8
King's	23,644	12
Longford	18,005	—
Louth and co. of Town of Drogheda.	13,658	—
Meath	14,052	1
Queen's	27,762	15
Mestmeath	15,695	1
Wexford	68,245	31
Wicklow	20,400	6
TOTAL	280,136	102

PROVINCE OF CONNAUGHT.

COUNTY.	TOTAL Number of Pigs.	Number of Farms or other Places upon which Fresh Outbreaks have been reported to have taken place during the Year 1892.
Galway	55,040	5
Leitrim	19,433	6
Mayo	48,212	31
Roscommon	32,048	17
Sligo	22,092	—
TOTAL	176,825	59

APPENDIX, No. 10.

Handed in by Sir *William Kaye.*

RETURN of the Number of Swine Exported from Ireland to Great Britain during each of the Years 1878 *to* 1892 *inclusive.*

YEAR.	SWINE.			YEAR.	SWINE.		
	Fat Swine.	Store Swine.	Total.		Fat Swine.	Store Swine.	Total.
1878 - - -	401,167	69,380	470,547	1886 - - -	391,509	29,776	421,285
1879 - - -	371,079	58,584	429,663	1887 - - -	438,155	42,765	480,920
1880 - - -	333,653	39,237	372,890	1888 - - -	495,680	49,292	544,972
1881 - - -	349,532	33,463	382,995	1889 - - -	428,103	45,448	473,551
1882 - - -	453,443	49,463	502,906	1890 - - -	543,417	59,745	603,162
1883 - - -	433,793	27,224	461,017	1891 - - -	459,596	43,988	503,584
1884 - - -	437,227	19,451	456,678	1892 - - -	457,977	42,974	500,951
1885 - - -	370,639	27,925	398,564				

APPENDIX, No. 11.

Handed in by Sir *William Kaye.*

RETURN of the Number of Swine Imported into Ireland during each of the Years 1878 *to* 1892 *inclusive.*

YEAR.	SWINE.			YEAR.	SWINE.		
	Fat Swine.	Store Swine.	Total.		Fat Swine.	Store Swine.	Total.
1878 - - -	248	66	314	1886 - - -	3	131	134
1879 - - -	105	42	147	1887 - - -	10	149	159
1880 - - -	12	230	242	1888 - - -	2	151	153
1881 - - -	1	373	374	1889 - - -	7	154	161
1882 - - -	2	37	39	1890 - - -	2	137	139
1883 - - -	—	8	8	1891 - - -	15	143	158
1884 - - -	2	28	30	1892 - - -	1	29	30
1885 - - -	29	79	108				

APPENDIX, No. 12.

Handed in by Sir *William Kaye.*

TABLE showing the Number of Farms or other Places in the Counties of Ireland upon which fresh Outbreaks of Swine Fever were reported by the Inspectors of the Local Authorities to have occurred during each Year from 1880 *to* 1892 *inclusive, with the Number of Swine reported to have been attacked, to have been killed, to have died, and to have recovered.*

DISEASE.	Description of Animals.	Years.	Number of Counties reported from.	Number of Farms or other Places upon which fresh Outbreaks took place.	Animals Attacked.		Diseased Animals.			
					Remaining diseased from the previous Year.	Attacked in each Year.	Killed.	Died.	Recovered.	Remaining diseased at the end of each Year.
Swine Fever - -	Swine - -	1880 *	15	81	–	300	40	209	48	3
		1881	15	48	3	171	16	120	38	—
		1882	18	89	–	287	14	207	66	—
		1883	28	419	–	1,198	62	892	228	16
		1884	22	235	16	564	19	403	150	8
		1885	26	423	8	1,271	159	840	254	26
		1886	23	495	26	1,630	351	979	311	15
		1887	22	506	15	1,983	527	1,165	299	7
		1888	24	392	7	1,315	405	721	184	12
		1889	22	273	12	761	245	419	108	1
		1890	22	365	1	1,014	438	417	157	3
		1891	18	278	3	870	404	354	109	6
		1892	23	227	6	466	139	226	106	1

* From 1st June 1880 only.

APPENDIX, No. 13.

RETURN showing the Number of Outbreaks of Swine Fever, and Number of Swine Attacked during each Year, from 1886 *to* 1892 *inclusive, in the Poor Law Unions in which Compensation for Affected Swine was paid by Local Authorities, as compared with the Unions in which no Compensation was Paid.**

Year.	Compensation Paid.				No Compensation Paid.			Total.		
	Amount Paid for Affected Swine Slaughtered. †	Number of Unions in which Compensation was Paid.	Number of Outbreaks.	Number of Swine attacked.	Number of Unions in which no Compensation was Paid.	Number of Outbreaks.	Number of Swine attacked.	Number of Unions.	Number of Outbreaks.	Number of Swine attacked.
	£. s. d.									
1886 - - -	276 12 9	16	224	601	49	271	1,029	65	495	1,630
1887 - - -	332 15 3	11	249	975	48	257	1,008	59	506	1,983
1888 - - -	321 16 3	12	208	673	51	184	642	63	392	1,315
1889 - - -	214 3 -	10	141	405	48	132	356	58	273	761
1890 - - -	355 16 9	15	232	656	44	133	358	59	365	1,014
1891 - - -	243 3 3	10	177	540	39	101	330	49	278	870
1892 - - -	131 17 3	11	79	175	50	148	291	61	227	466

* The Swine Fever Slaughter Order authorising slaughter and payment of compensation, came into force on the 29th July 1885.
† In some unions the Local Authorities did not pay compensation in connection with every outbreak.

The only Unions in which Compensation has been systematically paid during each Year in which Outbreaks occurred since the Swine Fever Slaughter (Ireland) Order of 1885, *came into force are, Newcastle, Kilmacthomas, Waterford, Naas, Gorey, Rathdrum, and Shillelagh. For particulars* see *appended Table.*

Year.	Newcastle.		Kilmacthomas.		Waterford.		Naas.		Gorey.		Rathdrum.		Shillelagh.	
	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.	Out-breaks.	Swine attacked.
1886 - -	11	27	9	19	56	187	22	63	9	26	41	99	11	35
1887 - -	21	57	4	48	40	251	20	40	28	95	46	149	34	148
1888 - -	18	33	12	87	66	275	9	19	44	134	11	16	19	50
1889 - -	32	104	4	13	33	121	13	16	24	39	14	26	13	34
1890 - -	22	56	7	36	64	186	19	30	32	95	39	75	15	42
1891 - -	15	42	13	71	30	124	13	16	63	167	27	62	12	22
1892 - -	10	29	—	—	16	54	4	5	26	33	2	2	6	14

The following Table shows the Number of Outbreaks and Swine attacked in these same Seven Unions, during the Years 1883, 1884, *and* 1885.

1883 - -	—	—	5	22	10	37	5	7	3	3	—	—	2	6
1884 - -	—	—	3	19	14	33	4	12	1	1	—	—	1	2
1885 - -	2	16	1	4	32	120	4	8	10	79	9	25	1	11

APPENDIX, No. 14.

Handed in by Sir *William Kaye*.

RETURN showing the Number of Outbreaks of Swine Fever in each of the Counties of Ireland during the Years from 1883 *to* 1892 *inclusive.*

	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	TOTAL.
PROVINCE OF ULSTER:											
County Antrim	–	–	–	–	–	1	–	–	3	1	5
„ Armagh	–	–	–	–	–	1	–	1	–	–	2
„ Cavan	3	–	12	6	1	1	–	–	–	5	28
„ Donegal	1	–	–	–	–	–	–	–	–	–	1
„ Down	2	1	1	–	–	1	–	1	–	2	8
„ Fermanagh	3	–	–	–	–	–	–	2	1	2	8
„ Londonderry	1	1	–	2	2	2	2	–	–	–	10
„ Monaghan	1	–	–	–	–	–	–	1	–	–	2
„ Tyrone	4	3	2	3	2	2	3	2	–	–	21
TOTAL ULSTER	15	5	15	11	5	8	5	7	4	10	85
PROVINCE OF MUNSTER:											
County Clare	2	8	7	6	3	–	1	2	1	–	30
„ Cork	4	3	7	4	16	13	3	10	7	10	77
„ Kerry	90	60	50	67	26	21	30	27	5	10	386
„ Limerick	17	3	24	29	30	29	39	32	31	17	251
„ Tipperary	56	18	39	31	64	24	12	12	7	6	269
„ Waterford	11	16	21	51	35	65	40	66	35	13	353
TOTAL MUNSTER	180	108	148	188	174	152	125	149	86	56	1,366
PROVINCE OF LEINSTER:											
County Carlow	13	3	3	23	21	11	5	3	6	6	94
„ Dublin	5	4	23	11	9	5	8	20	20	5	110
„ Kildare	6	9	6	44	21	16	21	27	23	17	190
„ Kilkenny	32	28	51	65	46	58	20	27	18	8	353
„ King's	9	2	13	2	2	9	8	7	12	12	76
„ Longford	22	4	2	3	–	2	–	1	2	–	36
Louth	13	5	2	–	–	–	–	–	–	–	20
„ Meath	8	1	19	26	11	8	1	2	–	1	77
„ Queen's	3	3	17	7	38	11	6	10	5	15	115
„ Westmeath	3	–	7	2	2	1	3	–	–	1	19
„ Wexford	89	60	78	44	90	67	37	39	73	31	608
„ Wicklow	2	1	13	54	82	31	24	63	28	6	304
TOTAL LEINSTER	205	120	234	281	322	219	133	199	187	102	2,002
PROVINCE OF CONNAUGHT:											
County Galway	15	–	5	9	2	11	7	10	1	5	65
„ Leitrim	1	–	–	–	–	–	1	–	–	6	8
„ Mayo	–	1	13	5	2	–	–	–	–	31	52
„ Roscommon	3	1	4	1	–	2	1	–	–	17	29
„ Sligo	–	–	4	–	1	–	1	–	–	–	6
TOTAL CONNAUGHT	19	2	26	15	5	13	10	10	1	59	160

SUMMARY.

ULSTER	15	5	15	11	5	8	5	7	4	10	85
MUNSTER	180	108	148	188	174	152	125	149	86	56	1,366
LEINSTER	205	120	234	281	322	219	133	199	187	102	2,002
CONNAUGHT	19	2	26	15	5	13	10	10	1	59	160
TOTAL IRELAND	419	235	423	495	506	392	273	365	278	227	3,613

APPENDIX, No. 15.

Handed in by the Rev. *Dixon Dixon-Brown.* (Q. 2404.)

COUNTY OF NORTHUMBERLAND.

Contagious Diseases (Animals) Acts, 1878 to 1886.—The Animals Order 1886—Movement into District.

Application for a Special Movement License.

QUERIES.	ANSWERS.
1.—State description of Animal proposed to be moved, and distinguishing mark?	
2.—From what place (stating name of farm or other place, County, &c.) is such Animal to be moved?	
3.—Is such place within the boundaries of an infected area, circle, or place?	
4.—Has such Animal been bred on the farm or premises from which it is proposed to be moved, or been pastured or fed thereon for a period of 28 days immediately preceding the intended movement thereof?	
5.—Has such Animal been exposed in a fair, market, or auction mart within the last 28 days?	
6.—Has the Animal to be removed been, within the last 28 days, in contact, or in a herd or flock, along with an Animal affected with disease, or reasonably suspected to be diseased?	
7.—Is the Animal to be removed now free from disease of any kind?	
8.—What evidence is furnished of freedom from disease?	
9.—To what place (stating farm, county, &c.) is such Animal to be moved?	
10.—Name and address of the person applying for the license?	
11.—Name and address of the present owner of the Animal proposed to be moved?	
12.—Name and address of the person to whom the Animal is to be forwarded?	
13.—By what route or mode of conveyance is the Animal to travel?	
14.—State whether the intended movement is for *breeding purposes*, or under exceptional circumstances justifying a relaxation of any existing prohibition or restriction, and if under exceptional circumstances set them forth?	
15.—If the license of any other Local Authority is necessary, has that been obtained?	

DECLARATION TO BE MADE BY APPLICANT.

I, _____ of _____

apply for a Special Movement License for the Animal mentioned in the foregoing particulars, and declare that the particulars set forth in the Answers to the foregoing Queries are in all respects correct.

(Signed) _____

Dated _____ 189 Applicant.

RECOMMENDATION BY CHAIRMAN OF EXECUTIVE COMMITTEE.

I recommend that a License be issued in accordance with the above application.

Dated _____ 189 Chairman of the Executive Committee.

Note.—A license in pursuance of this application can only be issued from the office of the Clerk of the Peace, Moot Hall, Newcastle-on-Tyne, or Berwick-upon-Tweed, and ceases to have operation after five days from the date thereof.

No.

COUNTY OF NORTHUMBERLAND.

The Contagious Diseases (Animals) Act, 1878.—Local Standing Regulation of 5th May 1887.

SWINE FEVER.

Proceeding on an application made by_____

SPECIAL LICENCE is hereby given on behalf of the Local Authority of the County of Northumberland, for the Movement of the Animals undermentioned from_____ (not being within an infected area or infected place) in the_____ of_____ to_____ in the County of Northumberland.

Description of Animals to be moved.	Distinguishing Mark of Animals to be moved.	Place from which to be moved, stating also Parish and County.	Place to which to be moved.	Name of Owner applying for Licence.

SPECIAL CONDITIONS (if any) as to route, or otherwise, imposed by Licensing Authority - - -

Dated this day of 1884.

Deputy Clerk to the Local Authority of the County of Northumberland.

This licence is available for five days, and no longer, and is to be exhibited when required to any local inspector or officer of Police, and is not transferable, and shall, on the arrival of the animals at their specified destination, be lodged at the Police Station in Northumberland nearest to such place of destination within 24 hours after the arrival of the animals thereat.

APPENDIX, No. 16.

Handed in by Mr. *Clare Sewell Read.* Q. 4224.

NORFOLK.

STATEMENT of Compensation and Expenses paid for Swine killed in consequence of Swine Fever, from 23 *December* 1878, *when the Disease came under the provisions of the Contagious Diseases (Animals) Acts.*

Year ending	Number of Outbreaks.	Number affected and killed.	Healthy Swine in contact killed.	Amount of Compensation paid.	Approximate Expenses.
				£. s. d.	£. s. d.
31 December 1879 - -	209	2,299	233	1,323 13 7	606 - -
„ 1880 - -	81	627	—	380 - 9	496 - -
„ 1881 - -	43	213	—	106 7 3	179 - -
„ 1882 - -	39	214	—	108 6 6	151 - -
„ 1883 - -	22	177	—	116 16 -	156 - -
„ 1884 - -	15	119	—	63 16 6	123 - -
„ 1885 - -	174	1,308	31	522 7 9	414 - -
„ 1886 - -	132	822	100	549 7 -	562 - -
„ 1887 - -	271	2,212	—	1,125 5 6	716 - -
„ 1888 - -	169	1,301	—	564 18 8	594 - -
„ 1889 - -	320	2,181	547	1,480 - -	965 - -
„ 1890 - -	149	906	982	1,111 15 5	1,012 - -
„ 1891 - -	184	1,282	797	1,222 17 11	1,058 - -
„ 1892 - -	73	795	—	289 4 6	307 - -
	1,881	14,456	2,690	8,964 17 4	7,339 - -

REGULATIONS which have been in force in the County of Norfolk from 1879-93.

8 *March* 1879.

Regulations made for Cleansing and Disinfection of Markets.

July to *November* 1885.

Public sales of Store Swine prohibited.

1 *December* 1886 to 28 *February* 1887.

Healthy Swine which had been in contact with diseased ones slaughtered.

8 *July* to 2 *October* 1887.

Extended from time to time till 31 *May* 1888.

Regulation that all Swine sent to Sales must be accompanied with a Declaration of owner that they have been on his premises for not less than 28 days immediately preceding the day of Sale, and that his premises were free from disease. And,

Regulation that all carts, &c., carrying pigs to markets should be properly cleansed and disinfected.

The Local Authority for Norwich made similar Regulations to the above, but allowed them to expire on 28th February 1888, without giving any intimation to our Local Authority.

12 *October* 1889.

Regulation made that all Healthy Swine which had been in contact with diseased ones should be slaughtered.

Regulation made that no Store Swine should be moved into Norfolk, except by license of this Local Authority.

5 *November* 1889 to 28 *February* 1890.

Extended to 30 *April* 1890.

Markets closed for Sale of Swine, except such as were intended for immediate slaughter. And,

That no Swine should be moved into the County which had been exposed at any Sale or Market within 28 days.

The Norwich Authority did not adopt similar Regulations as the two last-named, although they were asked to do so.

9 *November* 1889.

Regulations were made for cleansing of Sale Yards and Dealers' Carts.

20 *July* 1891.

Regulation that Healthy Swine which had been in contact should be slaughtered, discontinued.

14 *May* 1892.

Regulation that no Swine, except for slaughter within three days from date of removal, be moved into Norfolk from Suffolk, except with a Declaration by owner.

14 *January* 1893.

A similar Regulation to the last was made in respect of Swine coming from Bedford.

APPENDIX, No. 17.

RETURN handed in by the Rev. *L. C. Wood.* Q. 4514.

Showing the Number of Outbreaks in the County of Lancaster in 1892, *believed to be traceable to Swine imported from Ireland.*

SWINE FEVER.

Name of Place where Outbreak occurred.	Number affected.	Date when bought.	Date when reported affected.	Dealer.	From Ireland.	Bought in England, but probably imported from Ireland.
Bedford Leigh	1	12 February	14 February	Irish	—	1
Westleigh	1	3 „	17 March	ditto	—	1
Near Fleetwood	2	14 March	25 April	ditto	2	—
Westleigh	4	11 April	25 „	ditto	4	—
Culcheth	3	8 „	29 „	ditto	3	—
Westleigh	5	23 „	30 „	ditto	5	—
Leigh	3	9 „	30 „	ditto	3	—
Tyldesley	2	4 May	5 May	ditto	2	—
Bedford Leigh	6	22 April	5 „	ditto	6	—
Astley	2	26 „	6 „	ditto	2	—
Leigh	9	26 „	6 „	ditto	9	—
Tyldesley	2	17 May	25 „	ditto	—	2
Astley	2	17 „	26 „	ditto	—	2
Astley	2	17 „	26 „	ditto	—	2
Astley	4	17 „	26 „	ditto	—	4

APPENDIX, No. 18.

Handed in by Mr. *Clement Stephenson.* Q. 5264.

COUNTY OF NORTHUMBERLAND.

Contagious Diseases (Animals) Acts, 1878 to 1890. The Animals Order of 1886 (No. 7,446).
Local Regulation (No. 8/92).

SWINE FEVER.

NOTICE is hereby given, That the following Local Regulation has been substituted for that made by the Local Authority of this County on the 3rd day of October, 1892 :—

1. From and after the 21st day of November, 1892, until further or other order in this behalf, Swine shall not be moved by land or by water into the District of the County of Northumberland from the District of any of the Local Authorities named in the schedule hereto, except in pursuance of the following provisions :—

2. Swine intended for breeding purposes may be moved into the District of the County of Northumberland, from the District of the Local Authority of any County or District mentioned in the Schedule below ; but only upon condition that they shall be accompanied by a movement license, granted upon a declaration by the owner of the swine, *or his agent*, specifying the number and description of the animals proposed to be moved, the names and addresses of the consignor and consignee respectively, and the places from and to which the animals are intended to be moved, and also showing that such animals :—

(*a*) either have been bred on the farm or premises from which they are proposed to be moved, or have been fed thereon for a period of at least 28 days immediately previous to the intended movement thereof ; and

(*b*) have not within the period aforesaid been exposed in any market, fair, exhibition, or public sale ; and

(*c*) are not affected with disease, and have not, during the period aforesaid, been within the limits of an infected area, circle, or place, or in contact, or in a herd along with animals affected or reasonably suspected of being affected with disease.

3. A movement license shall continue in force for five days from the date thereof, and no longer, and shall be produced by the person in charge of the animals, to any officer acting in the execution of the said Acts, who shall require the production thereof, and shall be delivered to an Inspector of the Local Authority of the County of Northumberland, nearest the place of destination named in the license, within 24 hours of the arrival of such animal thereat.

4. A certificate which shall contain any false statement, or with regard to which the foregoing conditions shall not be satisfied or fully observed, *shall be void and of no effect.*

5. Provided that the foregoing Regulation shall not restrict the movement of Swine through the County of Northumberland, by railway, without untrucking.

SCHEDULE.

The Local Authorities of the Counties of Bedford, Buckingham, Cambridge, Chester, Derby, Devon, Dorset, Essex, Gloucester, Hants, Hertford, Kent, Lancaster, Leicester, Lincoln, parts of Holland, parts of Lindsey, London, Monmouth, Norfolk, Northampton, Salop, Somerset, Stafford, Suffolk, Surrey, Sussex (Eastern Division), Warwick, Wilts, Worcester, York (East Riding), York (North Riding), York (West Riding), Midlothian, and of every City, Borough, or Burgh, locally situated in, or immediately adjoining, any of such Counties.

Dated this 21st day of November 1892.

STEPH. SANDERSON,
Clerk of the Local Authority.

Moot Hall, Newcastle-upon-Tyne.

Forms of application for movement license may be obtained at the Offices of the Clerk of the Council, Moot Hall, Newcastle-upon-Tyne.

APPENDIX, No. 19.

Handed in by Mr. *Clement Stephenson.* (Q. 5268.)

COUNTY OF NORTHUMBERLAND.

SWINE FEVER, 1882, 1892.

Note.—These Returns are made up from 1st January to 31st December of each year.

YEAR.	Number of Outbreaks.	Animals Slaughtered		Animals Died.	Total Number of Animals.	Compensation or Slaughter of Animals		Total Compensation.
		in Contact.	Diseased.			Healthy.	Diseased.	
						£. s. d.	£. s. d.	£. s. d.
1882 - -	1	-	12	5	17	-	-	-
1883 - -	2	-	7	-	7	-	7 7 -	7 7 -
1884 - -	-	-	-	-	-	-	-	-
1885 - -	4	2	9	-	11	4 5 -	6 12 6	10 17 6
1886 - -	1	4	42	9	55	4 16 -	1 5 -	6 1 -
1887 - -	10	38	59	16	113	40 3 6	47 16 -	87 19 6
1888 - -	1	23	8	7	38	54 13 -	6 17 6	61 10 6
1889 - -	5	16	13	6	35	21 4 -	16 8 6	37 12 6
1890 - -	17	79	50	57	186	190 11 -	62 17 -	253 8 -
1891 - -	11	54	43	21	118	78 14 -	21 5 -	99 19 -
1892 - -	8	17	37	13	67	28 - -	12 15 -	40 15 -
Totals - -	60	*233	280	134	647	422 6 6	183 3 6	605 10 -

* Many in-contact healthy pigs are slaughtered by owners, and are not accounted for in the Returns.

APPENDIX, No. 20.

Handed in by Mr. *Clement Stephenson.* (Q. 5272.)

Suspected Outbreaks of Swine Fever in Northumberland.

YEAR.	Number of Cases.	YEAR.	Number of Cases.
1882 - - - -	2	1888 - - - -	8
1883 - - - -	1	1889 - - - -	10
1884 - - - -	Nil.	1890 - - - -	15
1885 - - - -	7	1891 - - - -	6
1886 - - - -	3	1892 - - - -	7
1887 - - - -	9		68

APPENDIX, No. 21.

Handed in by Mr. *Clement Stephenson.* (Q. 5383.)

NUMBERS of Irish Pigs shown in Newcastle-upon-Tyne Cattle Market from the 1st January 1892, *to 31st December* 1892.

DATE.	Numbers Shown.	DATE.	Numbers Shown.	DATE.	Numbers Shown.	DATE.	Numbers Shown.
5 Jan. 1892	355	12 April 1892	75	19 July 1892	- nil.	25 Oct. 1892	266
12 „ „	283	19 „ „	102	26 „ „	- „	1 Nov. „	243
19 „ „	328	26 „ „	152	2 Aug. „	- „	8 „ „	267
26 „ „	427	3 May „	60	9 „ „	- „	15 „ „	279
2 Feb. „	368	10 „ „	- nil.	16 „ „	- „	22 „ „	381
9 „ „	444	17 „ „	- „	23 „ „	- „	29 „ „	270
16 „ „	310	24 „ „	- „	30 „ „	- „		
23 „ „	184	31 „ „	- „	6 Sept. „	60	6 Dec. „	310
1 Mar. „	127	7 June „	- „	13 „ „	179	13 „ „	410
8 „ „	272	14 „ „	- „	20 „ „	144	20 „ „	651
15 „ „	246	21 „ „	- „	27 „ „	174	27 „ „	464
22 „ „	160	28 „ „	- „	4 Oct. „	112		
29 „ „	155	5 July „	- „	11 „ „	184		
5 April „	95	12 „ „	- „	18 „ „	268	TOTAL -	8,800

APPENDIX No. 22.

Handed in by Mr. *John Dunne.* (Q. 5907.)

COUNTY OF CUMBERLAND.

Contagious Diseases Animals Act, 1878—1890, and the Animals Order of Council, No. 3446, of 1886, Article 78.

SWINE FEVER.

NOTICE is hereby given, that the Executive Committee of the Local Authority of the County of Cumberland, by virtue and in exercise of the powers vested in them under the Animals Order of 1886, and of every other power enabling them in that behalf, have made the following Regulations :—

From and after the 6th day of June 1892, no Swine or Pig shall be moved by land or by water into the district of the Local Authority of the County of Cumberland, from the districts of any other Local Authority in England, Wales, or Scotland (excepting from the districts of the Local Authorities mentioned in the Schedule hereto), without a licence from a Superintendent of Police of the County of Cumberland, and such licence shall only be granted on the following conditions :—

1. That a declaration be made and signed by the Owner or his Agent that each Swine or Pig, in respect of which the licence is applied for, has for not less than 14 days immediately preceding the date of such declaration been in the owner's possession.
2. That Swine Fever has not existed on the lands or premises on which any such Swine or Pig has been kept for a period of 14 days immediately preceding the date of the declaration.
3. That none of such Swine or Pigs have been kept within a radius of two miles from a Swine Fever infected place for a period of 14 days immediately preceding the date of the declaration.
4. That none of such Swine or Pigs have been exposed for sale, or otherwise exhibited, at any Public Market, Fair, Auction Mart, Exhibition, or Sale for a period of 14 days immediately preceding the date of the declaration.

The licence shall specify the place in the County of Cumberland to which the said Swine or Pigs have to be removed, also the place from which they are to be moved, and the person to whom they are consigned.

The licence shall be available for six days, including the day of the date thereof, and no longer; and the Swine or Pigs, on reaching the place specified in the licence, shall not be again moved for a period of 14 days, provided that nothing in this Order shall be construed so as to prevent the slaughter of any Swine or Pigs removed by licence within the said period of 14 days, nor to Swine or Pigs moved by railway through the County of Cumberland without untrucking.

Forms of declaration and licence or other information can be obtained at any Police Station in the County of Cumberland.

Given under my hand at Carlisle in the said County, the 6th day of June 1892.

C. B. HODGSON,
Clerk of the Local Authority of Cumberland.

SCHEDULE above refered to.

The Boroughs of Carlisle and Workington; the District of "Lonsdale North of the Sands;" the Counties of Northumberland, Durham, Roxburgh, Dumfries, and the Boroughs therein.

Note.—The above-named Districts shall be exempt only so long as they remain free from Swine Fever.

APPENDIX, No. 23.

Handed in by Mr. *John Dunne.* (Q. 5907.)

COUNTY OF WESTMORLAND.

Contagious Diseases (Animals) Acts, 1878 to 1890.

SWINE FEVER.

THAT the Local Authority of the County of Westmorland, in exercise of the powers conferred by the above Acts, and the Animals Order of 1886, and of all other orders and powers in that behalf enabling them, *Do order* that the existing Orders and Regulations of the said Local Authority relating to the Movement of Swine or Pigs into Westmorland, be and they are hereby revoked as from the date when this Order shall take effect, but without prejudice to the institution or prosecution of any proceeding in respect of an offence committed before the commencement of this Order, and in lieu thereof *Do Hereby*, with a view of preventing the introduction of Swine Fever into the District of the said County make the following Regulations for regulating the Movement of Swine into their District.

From and after the Day of the date hereof until further Order in this behalf.

1.—It shall not be lawful to remove Swine or Pigs into the District of the Local Authority of the County of Westmorland from the District of any other Local Authority in England, Wales, or Scotland (except from the Districts or Divisions mentioned in the Schedule hereto), without a Licence from a Superintendent of Police of the County of Westmorland. Such Licence shall only be granted on the following conditions:—

1. That a declaration be made and signed by the Owner or his Agent that the Swine or Pigs in respect of which the Licence is applied for have for not less than Fourteen Days immediately preceding the date of the declaration been in the Owner's possession.
2. That Swine Fever has not existed on the Lands or Premises on which any such Swine or Pigs have been kept for a period of Fourteen Days immediately preceding the date of the declaration.
3. That none of such Swine or Pigs have been kept within a radius of Two Miles from a Swine Fever infected place for a period of Fourteen Days immediately preceding the date of the declaration.
4. That none of such Swine or Pigs have been exposed for sale or otherwise exhibited at any Public Market, Fair, Auction Mart, Exhibition, or Sale for a period of Fourteen Days immediately preceding the date of the declaration.

The Licence shall specify the place from which the said Swine or Pigs are to be moved, and the place in Westmorland to which they are to be moved, also the name of the person to whom they are consigned.

The Licence shall be available for Six Days, including the day of the date thereof and no longer; and the Swine or Pigs on reaching the place specified in the Licence shall not be again moved for a period of Fourteen Days, provided that nothing in this Order shall be construed so as to prevent the slaughter of any Swine or Pigs removed by Licence within the said period of Fourteen Days, nor to Swine or Pigs moved by Railway through the County of Westmorland without untrucking.

Forms of Declaration or other information can be obtained, free of cost, at any Police Station in the County of Westmorland.

SCHEDULE

Of Districts from which Swine or Pigs may be moved into the County of Westmorland without Movement Licence:—

The Borough of Kendal, the County of Cumberland, City of Carlisle, and the Police Divisions of Lonsdale North of the Sands, Lonsdale South (including the Petty Sessional Division of Hornby), and Ewcross (including the Petty Sessional Division of Sedbergh).

By Order of the said Local Authority.

JOHN BOLTON,
Clerk of the Westmorland County Council.

Kendal, 3rd June 1892.

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AUTHORITY, SANITARY. *Duguid* 471–81; *Walley* 774, 882–5, 831–3, 838–9, 913; *Redman* 1423–6, 1446, 1451–2; *Christian* 1630–3; *Hamersley* 1660–72; *Dixon-Brown* 2406, 2410–13; *Carroll* 2590–3; *Hedley* 2832, 3035–6; *Prentice* 3159; *Axe* 3393–407; *Sewell Read* 4233–5, 4348; *Duckham* 4426–37, 4448–9; *Wood* 4547–52; *Russell* 4714–20; *Crofts* 5105; *Craigie* 5239; *Tennant* 5443–53, 5634–6; *Dunne* 5816–22.

AXE, PROFESSOR J. WORTLEY (Analysis of his Evidence):

Is professor at the Royal Veterinary College, 3362. Has given a great deal of attention to diseases of swine, 3363, 3427, 3497–3500, 3515. Character and symptoms of the disease, 3365, 3371–2, 3409–40, 3463–89, 3517–45. Thinks the term "swine fever" is a good one, 3366. Modes in which the disease may be spread, 3367, 3454–64, 3550–7. Dirt does not originate but favours the spread of swine fever, 3368–9. Vitality of the virus, 3370–1, 3462. The disease can certainly be stamped out, 3373, 3453. It is absolutely necessary that it should be placed under a central authority, 3374, 3376, 3380, 3620. There should be slaughter of diseased and in-contact swine with liberal compensation, and restriction on movement, 3374–7, 3619–20. Want of uniformity of action has been the cause of failure in the present system, 3376. Virus of this disease corresponds more with that of cattle plague than with any other disease, 3378–9. It would perhaps for this reason be more difficult to deal with than pleuro-pneumonia, 3379. Swine fever has, however, a short incubative period, from three to eight days, 3379, 3470–1. After notice of an outbreak everything should be left to the central authority, 3380–6. Parts of diseased animals should be sent to the central authority to ascertain if it was swine fever, 3387–91, 3473–8, 3535. With proper care there would be no risk in sending these morbid parts, 3388–91, 3443–5. It would be desirable to insist upon all markets and public and private sale yards being paved, 3393, 3446–50, 3492–6. It would be desirable to register all places where pigs are kept, 3394–3401, 3546. And to license dealers, 3547–9. The sanitary conditions under which pigs are kept should and could be dealt with by the central authority, 3393–3407. If placed in the hands of a central authority the stamping out of the disease would not be a very long business, 3402, 3623. There should be several inspectors in different parts of the country having control over the local authorities, 3407. Diagnosis of the disease is very important, 3408. A temperature of 105 to 106 is reached when the fever is developed, 3410–6. There is an impression among professional men that 103 indicates fever; this is about the normal temperature of a pig, 3412–6, 3472. Normal respirations would be from 20 to 30, 3417–26. Discoloration of the skin, 3428–32, 3465, 3521–3. There are only two *post-mortem* indications which can be relied upon, the button-shaped eruption and croupous exudations, 3433–6, 3479–89, 3527. Disease of the lung and red patches on the skin are not indicative of swine fever, 3430, 3437–40, 3520–3, 3529–30, 3577–3601. The local inspectors should be still appointed and paid by the local authority, and paid by

AXE, PROFESSOR J. WORTLEY—*cont.*

the Board only when employed by them, 3386, 3441–2. Places no reliance upon protective inoculation, 3451–2. Swine fever is not caused by unwholesome food, 3464. Pigs affected with swine fever do not die suddenly, not within two or three days; frequently it is weeks before they succumb, 3466–8, 3532–3. Diseased animals generally are thirsty, 3469. Pigs are very liable to lung diseases, 3490–1. Lung disease accompanies swine fever very often, 3577–91, 3594–3601. Swine fever was formerly known as typhoid, 3500. Given a number of pigs affected, swine fever is fairly easy of detection, 3502–6. With an individual case it might be difficult even for an expert to decide, 3505. Witness would not say a case was swine fever without a *post-mortem* examination, 3507. Does not think inspection at a port is a guarantee that swine fever was absent in the pigs exported, 3508–9, 3570–4, 3609. Believes the disease exists generally throughout other countries in Europe, 3510. Witness had one case of recovery in pigs treated by him, 3511–3. Would not recommend any form of treatment, 3514. Would say it was not possible for a pig to die of swine fever without bowel lesions, 3531–4. Endocarditis or erysipelas is not a necessary lesion of swine fever, but is sometimes a complication, 3541–5. As soon as the pigs are slaughtered disinfection of the premises should immediately be carried out, 3552–5. The manure should be carefully disposed of, 3556–7. Witness has failed, either by inoculation or living in an atmosphere charged with swine fever virus, to infect himself, 3558, 3575–6. It would not be a good sanitary measure to have a sty close to a residence, but witness does not consider swine fever might be conveyed to the occupants, 3559–60. The delimitations of areas should be left entirely to the central authority, 3561–5, 3620. Attaches no importance to geographical boundaries, except that they are better known, 3566–9. Witness would not allow the importation of pigs from Ireland until the disease was stamped out in both countries, 3571, 3602–10. This would not affect our meat supply, 3613–4. Thinks there would be no risk if the pigs were slaughtered in Ireland and then sent to England, if diseased pigs were not dressed, 3610–8. You must restrict movement wherever the disease prevails, 3619–23.

BENGAFIELD, NATHANIEL (Analysis of his Evidence):

Lives at Motcombe in Dorset, 1091. Is a great breeder of swine, 1092–3. Extent and character of his business, 1094–5. Has great experience of the sales in Dorset, 1096–98. Handly sale, being close to Wilts, is entirely spoilt by the county boundary regulations, 1099. Movement of swine into Dorset from all counties, except those for immediate slaughter, has been stopped since October 1st, 1887, 1100–2, 1114, 1162–3. On 3rd January 1888 a regulation was issued allowing pigs to come into Dorset for special breeding purposes on a licence given by the clerk of the local authority, 1103, 1129, 1176. Somerset has regulations against Dorset, 1103. Pigs can be sent from Dorset without licence into Hampshire and Wilts, 1103. Since these severe regulations they have had as many outbreaks in Dorset as in Wilts, 1104, 1121, 1164–70. Attributes a good deal of supposed swine fever to injudicious feeding, 1105–7, 1182. Feeding pigs on separated milk produces symptoms similar to swine fever, 1105–6, 1122, 1175–6, 1181, 1185. In Dorset they generally slaughter all the affected pigs, and some that are not, and compensate for both, 1108, 1150–4. Does not advocate compensation, 1108–9, 1154–9, 1161. Compensation has a tendency to make owners careless, 1110–1, 1159. Believes the herds of pigs in the New Forest are regarded as a source of danger by the local authority of Dorset, 1112–4. The loss suffered by the regulations in Dorset has been more than the gain, 1114, 1172. Quotes instances, 1114–5, 1127–31. Pedigree pigs are more free from disease than ordinary pigs, inasmuch as they are better looked after, 1116, 1156. But thinks all pure-bred animals are probably more liable to disease than cross-bred animals, 1116. Thinks dirt encourages swine fever, and sometimes causes it, 1117–20, 1134, 1175. Pigs that in summer lie on hot manure heaps, and afterwards become chilled, get inflammation, and witness believes this will develop into an infectious disease, 1123, 1184–5. Is in favour of the Board of Agriculture dealing with swine fever, 1125, 1132. Objects to closing whole counties, 1125–31. County boundaries are not convenient,

BENGAFIELD, NATHANIEL—*cont.*

1125–31, 1142–9, 1160. Where there was swine fever would close the place, and all within half-a-mile radius from it, 1125. And kill all swine that had been in contact, 1125, 1157–9. People resent the restrictions imposed by the local authorities, and break the rules, 1129–31, 1140–1. Quotes a case, 1141, 1159, 1177. If the Board of Agriculture dealt with swine fever, the regulations would be uniform throughout the country, 1130, 1132, 1147–9. Thinks there is no difficulty in identifying genuine swine fever, 1119, 1133. There would be no danger in sending portions of diseased animals to London, 1133–4. The authorities know more about swine fever now than was the case seven or eight years ago, 1118, 1183. Pigs should be kept in clean places, 1134–40. It would be a good thing to license pig-owners, 1136–40, 1178. Owing to the restrictions many people in Dorset have given up breeding pigs, 1070, 1073. They have been prevented from buying pigs at Salisbury, which is their best market, for six years, 1132, 1173. Has not had swine fever in his herd, 1174. In Sherborne and Shaftesbury Petty Sessional Divisions you cannot move a pig unless it has been on your farm for 28 days, 1127–9, 1176, 1186. Swine fever should be dealt with like pleuro-pneumonia and foot-and-mouth disease. 1132, 1179–80. Not one in 20 of the reported cases are genuine swine fever, 1182. Thinks dealers are blamed more than they deserve, 1187.

BOARS. *Sanders Spencer* 663, 688–92, 699–702, 712–5; *Walley* 975–7; *Christian* 1587–9; *Hamersley* 1755–8; *Cunningham* 1779, 1909–10, 2026–31; *Carroll* 2705–6; *Newsom* 3636–8, 3738–45, 3782–7.

BRINE POISONING. *Duguid* 340, 452; *Walley* 845–8; *Hedley* 3037; *Stephenson* 5272.

CARROLL, PROFESSOR THOMAS. (Analysis of his Evidence):

Is principal of Glasnevin Model Farm, Superintendent of the Agricultural Department of the Commissioners of National Education, and Inspector of National Agricultural Schools, Ireland, 2541–3. Remembers an outbreak in Ireland in 1844, and has heard that swine fever existed in Ireland long before that, 2544. Symptoms of the disease, 2545–6, 2621–8, 2764–7. Mere dirt will not cause the disease but will keep it on premises for a considerable time, 2547–8. Cleanliness is of great importance, 2549. Quotes an outbreak which occurred 1886 at Glasnevin Model Farm, 2550–1, 2594–6. Account of an outbreak in the county of Wexford, 2552–3. A favourite way with farmers of getting rid of diseased animals is to throw them in a river if there happens to be one running through the farm, 2553, 2698. They are sometimes buried or thrown in ditches, 2702. Believes swine fever exists to a greater extent in Connaught and West of Ireland than in other parts of Ireland, 2554–5, 2615–6, 2696. Attributes this to the large number of pigs in the villages, the contact of these pigs in consequence being greater, and the indisposition of the peasants to make known the disease, 2556–7, 2653. Has known several cases of the disease being concealed, 2557, 2597–9. Very few cases are dealt with under the Contagious Diseases (Animals) Act, 2558, 2566, 2573, 2629–31, 2719. There have been very few cases where compensation has been paid, 2558, 2676–8, 2784–5. The boards of guardians are the local authorities, 2559–64, 2788–96. The board of guardians act as a body, they do not appoint sub-committees, 2565. They appoint an inspector, who is sometimes also the valuer, 2565. Very little action is taken with regard to movement, 2567. The unions vary in size a good deal, 2568. Thinks as a rule the unions are too large for dealing with diseases of animals, 2569, 2572. The difficulties of securing united action are very great, 2569. The Irish unions are larger than those in England, 2570–2. The boards of guardians have done very little to stamp out the disease, 2573, 2629–31, 2719. The carrying out of the orders should be given to the Veterinary Department of the Privy Council, 2574. Smaller areas than unions might be constituted, viz., townlands, 2574–7, 2713. The Privy Council should have the appointment of veterinary inspectors, 2578, 2581, 2635–6, 2713–4, 2762, 2776–82. These need not be permanent appointments, 2801–3. It should be the duty of the owner, as it is now, to give notice of disease to a constable, 2563, 2579

CARROLL, PROFESSOR THOMAS—*cont.*

The constable should call in the local inspector, 2580. The inspector, after inquiry, should notify the Department in Dublin, 2582–3. The diseased pigs and all in contact should be slaughtered, 2583. There would be no difficulty in the local inspector knowing if it was swine fever or not, 2584–5. It might be desirable to send portions of a diseased pig to Dublin for examination, but thinks it scarcely necessary if the local veterinary inspectors were approved by the Privy Council, 2585, 2634. If carefully packed there would be no risk in sending these portions, 2586. With proper compensation the inclination to conceal disease would be diminished, but there should also be a good system of inspection, 2587–8, 2599–2600, 2637–9, 2679. Is afraid a system of licensing would be resisted, 2589. The difficulties of disinfection would be very great in Ireland, especially in the west, 2589. If the Public Health Act were carried out it would do a good deal towards minimising risk of disease in towns owing to pigs being kept in a filthy condition, 2590. Unfortunately the Public Health Act in Ireland is not carried out very satisfactorily, 2590. Thinks the keeping of pigs in large cities is not generally practised, 2590. Thinks it would be desirable if the Public Health Act could be enforced if there was a nuisance likely to be injurious to the health of animals, 2591–3. Mode in which they disinfected their premises after the outbreak in 1886, 2594–6, 2641. They have had no outbreak since, 2551, 2596. Thinks there is a great deal of ignorance of the requirements of the law, 2599, 2687–90, 2798. The present maximum of compensation should be increased to 7*l*., 2601–3, 2717. Has no doubt that if proper measures were taken the disease could be stamped out in a short time, 2604, 2652, 2761–2. The measures should be, slaughter of diseased and in-contact pigs, restriction on movement, sanitary precautions, and liberal compensation, 2753–6. Pigs are not kept in large herds in Ireland, but in the country nearly every householder has a pig, 2605–7. As a rule the peasants do not breed, but buy their pigs at fairs and markets, 2608–10, 2662. There is a large traffic in pigs, 2611–6, 2661–8. Pigs are sent long distances by rail and road, 2612–3, 2661. As a rule the cottagers do not kill their pigs, but sell them fat, 2617–18, 2666. Along the Midland Great Western Railway there is a growing trade in sending pork to England, 2618. You rarely find diseased pigs in a market, 2619, 2697. Does not know of there being any systematic inspection at the markets, 2620. Believes, with the help of the constabulary, that local veterinary inspectors could stamp out the disease, 2632–3, 2639–40. Would certainly employ the constabulary in dealing with swine fever, 2703, 2731–5, 2768–70. Many veterinary inspectors are not fully qualified to diagnose swine fever, 2636, 2776–9. You could disinfect the cottages where pigs are kept by burning sulphur, but it would be difficult to disinfect the sties in this way, 2641–5. Thinks carbolic acid would be better for the sties, many of which are merely a cairn of loose stones, 2644–5. Where the sty is of wood it should be burnt, 2646. Has not known of carbolic being poisonous to pigs or poultry, 2647–51. Thinks a regular system of inspection could be carried out in the West of Ireland, 2653–8. The pigs in many cases live with the people, 2655–6. Has had considerable success in disinfecting, 2659. There are dealers in store-pigs who attend fairs yet in the South of Ireland but they are not general, 2669. Has no knowledge of disease being disseminated by dealers, but would say they have been the means of spreading it, 2670–1, 2704. Does not think many store pigs are sent to England; the pigs sent are for killing, 2673, 2772–5. The inspection he suggests should be a regular system of irregular visits, 2674. The local inspector and constabulary should have power of entry whether in a case of suspicion or not, 2675, 2684–6, 2731. Slaughter and compensation by the local authority is permissive, 2676. If the maximum was raised to 7*l*. and compensation given for diseased and in-contact pigs, thinks the people would help to stamp out the disease, 2679. Thinks swine fever is most rife in Ireland in the autumn, 2680, 2720–1. Owing to movement and purchase of pigs for the potato crop, 2721. Close breeding might render animals more liable to contagion, 2681–3. Every means should be taken to make known the requirements of the law, and that compensation will be paid, 2691–3, 2783. Where there is a considerable outbreak of swine fever, fairs or markets should be closed for pigs, 2694–5, 2748–50. Some years ago, if a diseased pig was sent into Limerick, the local authority purchased a creel of turf, had the pig cremated, the owner having to pay for the turf, 2699–2701. Has known diseased pigs to be killed and cured by the owner, but there is a general feeling that it is dangerous to use a diseased pig, 2702. Thinks they might, if cured, be safe to eat, 2708. Has always been in favour of licensing dealers and drovers, 2704. Boars are likely to infect pigs, boar stations should be registered, 2705-6. Has known cases where pigs affected with swine fever have been cured, 2707–9. But it is not worth the trouble, as they are never worth keeping afterwards, 2709–11. The question of swine fever is of great importance to Ireland, 2712. Is afraid the people do not regard it of importance, 2727, 2797. The constabulary should, if necessary, be paid for the extra work, 2714–5. All cases of infringement of the law should be dealt with severely, 2718. Swine fever is better understood now than formerly, 2722. Thinks swine fever is well marked in the living animal and unmistakeable, 2723–6, 2763. Would say about one-half the pigs in Ireland are sent to England, 2728–9. There should be uniformity of action between England and Ireland, 2730. Glasnevin is in Dublin Union, 2736. In the outbreak which occurred at the Model Farm the disease was brought from the city, 2737. The majority of the cases are on the premises of the small farmers, 2738. Has known of recurrence of the disease on the same premises within a short time, 2739. The disease has been communicated in the sty, 2740. Does not think one breed of pigs is more susceptible than another, 2741–2. Thinks markets are a frequent source of spreading the disease, 2743–4. Except in large towns, is not aware that there are any requirements in Ireland as to paving, &c., of markets, 2745. Markets take place frequently in the streets or on fair greens, 2746–7. Does not know of a market having been closed for pigs, 2751. Thinks movement of cattle from places where the disease is prevalent might carry it, 2752. Is certain there is no decrease in swine fever in Ireland, 2757–60. Purple blotches come out on swine in diseases other than swine fever. 2766-7, 2804–5. The risk of disease from England to Ireland would be greater than *vice versâ*, 2771–4. Believes if a man gives notice, his place is shut up for 28 days, 2787.

CARTS, DEALERS'. *Duguid* 90, 146–50, 438; *Sanders Spencer* 602–3, 763; *Redman* 1210; *Hamersley* 1657–9, 1729, 1762; *Cunningham* 1975, 2024–5; *Hedley* 2830–1, 2894, 3059–66; *Treadwell* 3297; *Sewell Read* 4224, 4304, 4322–3; *Russell* 4745; *Crofts* 4877–80, 4909–10, 5129–32; *Tennant* 5414; *Dunne* 5762.

CHARACTERISTICS. *See* SWINE FEVER.

CHRISTIAN, ADMIRAL HENRY (Analysis of his Evidence):

Chief Constable of Gloucestershire, 1453. Is Chief Inspector for the county under the Cattle Diseases Acts, 1454. System pursued in Gloucestershire in regard to swine fever, 1455–62. They slaughtered and paid compensation from 1880 to 1887; 1455. During which time they paid upwards of 7,000*l*., 1455–8. In 1887 swine fever had increased, 1458, 1516. The markets were then closed except for fat pigs for immediate slaughter, 1458–61. Restriction on movement has been more effectual than any other method, 1459, 1483, 1508. Last year swine fever increased, and the markets were again closed, 1460. Only had six outbreaks this year and none since February 12th, 1461, 1518–9, 1544. Has had no difficulty in tracing the history of pigs in an outbreak, 1462–3, 1543. Most of them have been traced to local sources, 1464, 1553. Disease breaks out in the cleanest as well as the dirtiest pigsty, 1464, 1540. Does not think dirt creates the disease, 1465. Quotes an outbreak among pigs fed on bad tinned meats, 1466, 1579–80. Thinks swine fever is analogous to typhoid, 1468. The county provides police for all the towns, 1469–70, 1557–9. This is an advantage, 1522–3. The boundaries of the county are very peculiar, 1474–6, 1478–82. No transfer of jurisdiction in respect to these boundaries has been made under the Act of 1886; 1477–8. Would favour such transfers, 1479. The peculiarity of the boundaries causes inconvenience, 1480–2. Slaughter alone is useless unless accompanied with restric-

CHRISTIAN, ADMIRAL HENRY—*cont.*
tion on movement, 1483–4, 1534. It is likely that cases are not reported when compensation is not paid, 1485–6, 1521, 1599. There were 24 convictions in swine fever cases last year in his county, 1486–9, 1524–7, 1600. Does not remember ever having followed up cases into other counties, 1489. Thinks it would be a good thing if the Board of Agriculture were to deal with swine fever, 1490–1, 1531. As at present there is no uniformity of procedure in the various counties and boroughs, 1491, 1501–7, 1528–31. The police should still have the power of calling in a veterinary inspector, 1492. The Board of Agriculture could not carry out the work without the aid of local authorities, 1532–3. The veterinary inspectors should be appointed by the local authority, 1493, 1590. Subject to the approval of the central authority, 1591–3. The orders restricting movement, closing markets, &c., should emanate from the central authority, 1494. Compensation should come from a central fund, 1495. Thinks the present maximum of compensation is sufficient, 1497–1500. Quotes a case where too much compensation was paid, 1496–7. There should not be various jurisdictions within a county, 1501–7. Considers from motives of economy that there is no necessity for slaughtering healthy in-contact animals, 1509–10, 1514–15. If, however, all diseased and in-contact animals were slaughtered there would be less chance of the disease spreading, and there need not be such long periods before a place is declared free, 1511–16. Does not think there is much concealment in his county, 1486, 1520, 1527. The danger is that ailing pigs are sent to market, 1521. Thinks that swine fever can be reduced to a minimum, but not extinguished, 1483, 1534–7, 1605–9. Slaughter compensation and restriction on movement have not been in force simultaneously, 1538. Thinks swine fever would be more difficult to exterminate than either pleuro-pneumonia or foot-and-mouth disease, 1539, 1606–9. Thinks swine fever has a spontaneous origin, 1541–2, 1597–8, 1610–11. As so many cases cannot be accounted for, 1542–7, 1598, 1612. Their superintendents are not allowed to call in a veterinary inspector, unless there is a doubt, or if the owner wishes, 1547–51. The police cannot detect swine fever unless the pig is opened, 1548–9, 1614–15. Pigs are kept in great numbers in Stroud district, 1552–3. There has been more disease there than in any other district, 1552. Markets are a general medium of disseminating swine fever, 1554, 1569–70. Pig dealers are very apt to carry disease about, 1555, 1583–5. It would have a deterrent effect if they were licensed, 1556, 1581. Their premises should be inspected, 1582. Large numbers of pigs come from Ireland to Bristol, 1560–2. Has no reason to believe that disease is disseminated from Bristol, 1563. The police see that, within three days after a market is held, the place is cleaned in accordance with the regulations, 1564. Thinks all the markets in Gloucestershire are paved, 1566. Does not think brick floors are good, 1566, 1620–1, 1629. Recommends asphalte or cement laid with ridges, 1622–4. Nailsworth market has been recently paved, and witness thinks this has had the effect of diminishing the outbreaks in the neighbourhood, 1567–70. Swine fever is regarded a matter of great importance in Gloucestershire, 1571–2. Is not aware of any trade between Gloucestershire and Bedford, 1573. Does not know a case in which compensation has been paid a man more than once, 1574–6. Does not think compensation would tempt a man to introduce the disease, 1577. Has heard no complaints of pigs being damaged by unslaked lime in railway trucks, 1586. Boars should be under inspection, 1587–9. Has not heard of dogs digging up bodies of pigs buried in a dungheap, 1595. Infection might have been carried in this way, 1596. Closing markets must impose hardships on feeders, 1601–4. The police get notice of disease from the owner, and often from outside reports, 1613. Objects to the police being paid for reporting, 1616–8. Cannot suggest any restrictions other than those which exist, 1619. Thinks there would be no difficulty in giving County Councils power to regulate the construction of pigsties, 1630–2. Does not think public opinion would resist this, 1633. They have never removed a pigsty, as they have no power to do so, 1634.

CHOLERA, HOG. *Sanders Spencer* 489–90, 505; *Hedley* 2908.

COMPENSATION.—*Duguid* 86, 87, 97, 108–13, 122–9, 354–9, 360–71, 400–5, 415, 419, 469; *Howard* 171, 191, 225, 229–34, 257, 288–95, 298–300; *Sanders Spencer* 518–9, 539, 556, 558–68, 580–6, 687; *Walley* 756–8, 1035–45; *Benjafield*, 1108–11, 1150–61; *Redman* 1215, 1256–7, 1260, 1330, 1411, 1434–42; *Christian* 1455–8, 1485–6, 1495–1500, 1521, 1574–7, 1599; *Hamersley*, 1673, 1701–5, 1732–5; *Cunningham* 1785, 1788, 1813, 1848, 1868–71, 1891, 1931–4, 1959–63, 2098; *Dobbie*, 2174, 2198–211, 2205–20, 2224, 2231, 2254–8, 2390–4; *Dixon Brown* 2414, 2417, 2424–35, 2436–49, 2475–6, 2484–7, 2492, 2504–9, 2514–25; *Carroll*, 2558, 2587–8, 2599–603, 2637–9, 2676–9, 2691–3, 2717, 2784–5; *Hedley* 2833–4, 2841–3, 2866–8, 2978, 3015–6, 3043–6, 3078–80, 3089–90, 3105; *Prentice* 3185, 3212–8, 3227; *Treadwell*, 3236–9, 3260, 3272–4, 3278–9, 3293–4, 3302, 3330; *Axe*, 3374–7, 3619–20; *Newsom* 3646, 3655–7, 3753–7, 3771–81, 3815–9, 3825–6; *Garratt* 4169–71; *Sewell Read*, 4244–5, 4256, 4262; *Duckham* 4458–66; *Wood* 4491–2, 4538, 4542–6, 4593–4, 4599–600, 4608–12, 4621–6, 4667–76; *Russell* 4696, 4698, 4775–6, 4842–7; *Crofts* 4898, 5034, 5135–47, 5152–4; *Stephenson* 5261, 5268, 5273, 5289–91, 5299–5304, 5332, 5364–6; *Tennant* 5389–96, 5398, 5400–3, 5427, 5500, 5512–3, 5547, 5560, 5567, 5581–8, 5633; *Dunne* 5781–7.

CONCEALMENT OF SWINE FEVER. *Duguid* 106–7, 123–9, 131, 362–8, 399–404, 419, 443; *Howard* 172–4, 192–200, 235–8, 260; *Sanders Spencer* 539, 556, 570–2, 652–6, 687; *Walley* 866–70, 1035; *Redman* 1257, 1260, 1411; *Christian* 1485–6, 1520–1, 1527, 1599; *Hamersley* 1731, 1735, 1868–71; *Dobbie* 2226; *Carroll* 2557, 2597–9, 2679; *Hedley* 2868–9; *Prentice* 3227; *Garratt* 3885, 3892, 3902, 3909–4, 4051, 4131–4, 4164, 4169–71, 4183; *Sewell Read* 4292, 4312; *Wood* 4601; *Russell*, 4698, 4702, 4788, 4854, 4863–4; *Crofts* 4978–80, 5121–3; *Stephenson* 5326; *Tennant* 5393–4; *Dunne* 5756, 5841–2.

CRAIGIE, MAJOR PATRICK GEORGE. (Analysis of his Evidence):

Director of the Statistical Department, Board of Agriculture, 5209. Number of pigs in the United Kingdom, 5211–12. Enormous decrease in 1892, 5212. Probably owing to the fact that the number of pigs in the kingdom in 1890 was at the maximum, prices receded and owing to the trade not being profitable there was a discontinuance of breeding, 5213. There seems to be no arithmetical relation between the loss owing to swine fever and the general decrease, 5213, 5238–9. Fluctuation in the numbers of pigs in the kingdom has been very great at all times, and difficult to explain, 5213. Percentages of decrease in disease in various counties, 5214. Suffolk is the greatest pig county, the number in it being 131,000; 5214–5. Figures showing the loss owing to swine fever, 5217. Estimates last year's home production of pig meat at 227,000 tons; the loss owing to swine fever, at 1,400, representing a money loss of 70,000*l.*, 5219. Figures showing the proportion of foreign pig produce to the home production, 5221. Proportion of consumption of pig meat to that of other meats, 5221. Thinks swine fever is one of the factors that deter breeders from going into the trade, 5222. High prices in pork have always stimulated foreign importation, which has been followed by low prices, 5223. The trade in pigs imported from Ireland is comparatively steady, 5224. The agricultural returns in Great Britain were collected from every occupier of more than a quarter of an acre of land; in Ireland witness thinks they are collected from every occupier, 5225–7. The schedules are now delivered to no one occupying less than an acre, but all animals of whose existence the collectors have knowledge are enumerated, 5230, 5252–3. Expects that many thousands of pigs belonging to colliers, &c., are not enumerated in Great Britain, 5225–30, 5236. Last year, however, 16,500 pigs were enumerated as belonging to persons who did not occupy land, 5230. To get at all the pigs owned by small owners would involve enormous expenditure, and it would be a question whether it would be worth the cost, 5231–3. Undoubtedly a number of pigs are missed in the returns, and also the pig meat that is consumed of unenumerated animals, 5233–4. Thinks by far the largest proportion of pigs are accounted for, and for comparative purposes the figures are of complete value, 5235–7. In accounting for the decline in

CRAIGIE, MAJOR PATRICK GEORGE—*cont.*

numbers last year some of the collecton mentioned the prevalence of swine fever and restrictions for swine fever, 5239. A decrease was noticed owing to restrictions imposed on the keeping o pigs in and near urban districts, 5239–40. Thinks present high prices are owing, in a great measure, to a discontinuance of breeding, 5244. The total food consumption per head of animal food is about 125 lbs., that of pig meat is from 28 to 34 lbs., 5221, 5246. The consumption per head has distinctly increased in the last 20 years, 5247–8. The pig census is taken on same day all over the country, viz., 4th June, 5249–50. Possibly a few pigs are counted twice over, on the other hand some are omitted, so that in the total number the error would be insignificant, 5249–51. Has prepared a table showing the number of foreign pigs imported which were affected with swine fever, 5254.

CROFTS, HENRY (Analysis of his Evidence):

Is veterinary inspector for the Borough of Bedford and also for the northern division of the county, 4869–72, 4940. There is a considerable agricultural area in the borough, 4873–4, 4941–3. A great deal of this area is laid out in allotments, with piggeries distributed over them, 4943–4. There has been more swine fever in the county than in the borough, 4875, 5156. The outbreaks are not attributable to any single cause, 4876. The principal cause are the dealers' vehicles used for conveying swine, 4877–80, 5129. These carts have to be cleaned and disinfected in Bedford, 5129–32. Witness and two veterinary inspectors examine the pigs in Bedford market every Saturday, 4881–3, 4955–60, 5023–6. The police inspector is supposed to look after the sanitary condition of the auctioneers' pig pens, 4881, 5027. Within the last three months veterinary inspectors have been specially appointed to inspect the premises and pigs of the dealers in Bedford, 4881, 4897, 4961–2. The county has been closed at times, and is now, against pigs from the borough of Bedford, 4884–91, 5155, 5186–7. The county have prohibited store pigs from Hunts, Cambridge and Herts, but they are taken through by rail into the borough, 4887–91, 5188. The county looks upon the borough as a source of infection, 4887, 4892. There have been more cases in the borough of Bedford in the last three months than in any preceeding six years, 4892. Witness has traced the origin of it, 4892–3. History of the outbreak, 4894–8, 4918–20, 5011, 5028–31. The author of this outbreak was not prosecuted by the Bedford authorities; but witness thinks he has been prosecuted by other authorities, 5113–5. Neither the county or borough slaughter or give compensation, 4898. When, however, witness sees a suspicious animal he can have it slaughtered and pay for it, in order to see if it is swine fever, 4898, 5032–7, 5135–7. Has not paid of late as the owners kill on their own responsibility, 5135–6. Only fat pigs are sold in Bedford market now, 4899, 4947–51, 5014–23, 5158, 5165–70. Bedford market is well looked after, 5004, 5027. Bedford being a pig market, is a source of any evil which may arise therefrom, 4900–3, 4952, 4997–8. Twenty-eight days is not sufficient; premises should be closed for either three months or the pigs removed only for slaughter, 4904–7, 4928–30, 5127–8. Pig dealers should be licensed but not pig keepers generally, 4908, 4913–7. A condition of the licence should be that they comply with regulations as to disinfecting their carts, etc., 4909–10. The floors of railway trucks are so constructed that they cannot be cleansed and disinfected thoroughly. The floor of the trucks should be removable, 4911–12, 4931–9, 5012, 5038–46, 5109–12, 5133–4. It would be desirable to require all manure and refuse of pigs in all slaughter-houses to be destroyed, 4919–27. The numbers of pigs on the dealers' premises vary considerably, 4945. Does not know the number of pigs in Bedford, 4945–6. Approximate number sold in the market, 4947–51. Their inspection of dealers premises is no guarantee that a diseased pig had not been there within 24 hours, 4962. Has never treated pigs for swine fever, 4963. There are three distinct forms of the disease, one the mild or latent, the lame form and the acute, 4964–77, 5061. Has never seen erysipelas together with swine fever, 4970–1. Erysipelas is distinct from swine fever, 4972. It is an infectious disease, 5087–95. Thinks 50 per cent. of recoveries take place without treatment, in the mild form of swine fever, 5 or 10

CROFTS, HENRY—*cont.*

per cent. of the acute cases recover, 4974–5, 5096–8. Swine fever occurs at all ages of pigs, 4976. The younger the pigs, the greater the number of deaths, 4977. There is a great deal of fraudulent concealment, 4978–9. Has several times seen exhumed cases, 4980, 5121–3. Under the Act a carcase cannot be exhumed, but in these cases the animals have been so badly buried it hardly amounts to exhumation, 5121–3. This has led to convictions, 4981–2, 5124. The county are more stringent in prosecuting than the borough, 5159–62. The punishment has only been a few shillings, and has no deterrent effect, 4984–5, 5125. There are a great many dealers in Bedford, 4986–9. Does not know of any pig clubs in Bedford, 4990–2. There have been recurrences of the disease on the same premises, in the county, 4993–5. Attributes this to imperfect disinfection, and also to the latent form of the disease, 4996. Has known a number of cases traced to pigs which have passed through Bedford Market, 4997–8, 5099–104. Bedford has a greater name as a nest of disease than it ought to have, 4998. He always tries to find the origin of every outbreak, 4999, 5102–4. The police report outbreaks to him, believes this is properly done, 5000–1. In an open condition the markets and fairs are a source of disease, 5003. The pig dealers do their business by advertising, and at times have no pigs in their possession, 5005–7. Has seen instances in the papers where fines have been imposed on these dealers, 5010, 5115. Thinks it would be an improvement if the Board of Agriculture in future dealt with swine fever, 5013, 5151. Thinks the disease can be stamped out, 5150. The fat pigs leave Bedford Market for slaughter; witness supposes they are slaughtered, but has no trace of it, 5015–20. Way in which witness would carry out disinfection of premises, 5047–60. Cement or impermeable floors, drained, would be the proper thing, 5060, 5116–9. Would use carbolic acid or chloride of lime as a disinfectant, 5050. Would burn wooden sties, but has never done so, 5055–7. *Post-mortem* appearances of swine fever, 5065–86. A pig may die of swine fever without showing external symptoms, 5062–4. In severe types there would be an outbreak on the skin, 5120. Contamination in railway trucks is a source of disease in some cases, 5111–2. Is not satisfied with the way pigs are kept in Bedford, 5105. Thinks the pig trade in Bedford might be carried on more respectably, 5107–8. When compensation was paid, the system did not work, and witness was suspicious that people endeavoured to buy pigs, and nurse the disease, 5138–47. 5152–4. Thinks if the Board dealt with swine fever it would be better to shut the premises up, and let no pigs be removed, 5148–9. Is not aware that there are any dealers or people interested in the pig trade on the local authority for either county or borough, 5163–4. Has not known lean pigs exposed as fat in Bedford Market, 5165–71. There are many dealers in store pigs in Bedford, 5171. Does not know of any dealers in the county who avoid Bedford Market, 5172–5. Is not aware that pigs from Bedford are sold in other counties at half their value, 5176–8. Definition of a dealer, 5179–86. There are a great number of small county and borough jurisdictions round Bedford, 5190–5208. They will not work in unison, and this constitues a difficulty, 5203–8.

CUNNINGHAM, CORNELIUS (Analysis of his Evidence):

Is a veterinary surgeon and one of the local inspectors for Midlothian, 1775–6. Has given a good deal of attention to swine fever, 1777. Character of the disease and the circumstances which tend to spread it, 1779–80, 1783, 1922, 1935–7. Young pigs are most subject to it and succumb most readily, 1779, 1912, 1977. Has known instances where the disease has lingered for two or three months in animals in a chronic form, 1779–83. Instance of a case attributed to rats carrying the infection, 1780. Brood sows and boars will sometimes succumb suddenly, 1779, 1909–10. The germ does not originate, but finds a congenial soil in dirt, 1779, 1976. During 1890 and part of 1891 witness was not an inspector of the local authority, 1781. Swine fever existed in his district from December 1890 to May 1891, unrecognised 1781. The disease was concealed, 1781, 1867, 1874–6, 2039–42. Believes the local inspectors in Midlothian do not all adopt the same mode of procedure, 1784, 1914, 1983–4, 2096–8. The present system is to kill and compensate for the diseased and allow the healthy

CUNNINGHAM, CORNELIUS—*cont.*

pigs to live, 1785, 1788, 1959–63, 2098. Witness is in favour of killing the diseased and all in-contact pigs, and has always adopted this policy, 1785, 1816, 1881–2, 1892–8, 1959, 1963, 2098. Has since 1883 had to deal with 50 outbreaks among 2,000 pigs; gives details, 1785, 1790–6, 1810–6. *Post-mortem* examination should always be made, 1785, 2114. Way in which witness deals with an outbreak and carries out disinfection, 1785–8, 1854–7, 1924–7, 1987, 2014–16. All old woodwork should be burnt, 1785–6. Where the floors of the sties are not paved the soil should be removed to a depth of 6 inches, and relaid with ashes and gas-lime, 1787–8, 1988. Has traced outbreaks to pigs brought in from the districts of other authorities, but could not trace where the pigs originally came from, 1789–95, 1807, 1974, 2090–1, 2137. Quotes cases which occurred at Gorgie, 1791–6, 2039–42; one man's pigs were surrounded by disease and they escaped, 1796, 2021–3. There are not many Irish pigs in his neighbourhood, 1798, 2062–6. Pig-feeders should be licensed, 1799, 1801–5, 1888, 2032–4, 2081–9. Defines a pig-feeder as one who makes his living out of it, 2076–8. They should not be allowed to keep pigs unless their piggeries were properly constructed, 1799–1805. Has only had one outbreak on a farm; the majority were among pig-feeders' stocks, 1800, 1970–2, 2079. Instance of a Scotch county where, he is told, nothing is done in regard to swine fever by the local authority, 1808, 1837, 2048–61. The Board of Agriculture should deal with swine fever much in the same way as has been done with pleuro-pneumonia, 1808, 2006, 2099, 2105, 2128–34. Has not had an outbreak in his district for 12 months, 1810, 1844–5, 1868, 1964–5, 2098. Case in which 302*l.* was the valuation for 240 pigs, and the local authority only received 71*l.* salvage, 1813. 135 were killed as diseased and buried, and many of the pigs were condemned for tuberculosis, 1813, 1849–53. Quotes a case of one piggery in which were 110 pigs, nearly all of which were impregnated with tuberculosis, 1852, 1941–6, 1998, 2143. There are not so many piggeries at Dalry as there were formerly, 1817–20. His district is near the city of Edinburgh boundary, 1821–9. It comprises Gorgie, Slateford and Stoneyport, 1826, 1979. There would be about 600 pigs in Gorgie, 1828. In the large piggeries and on farms the pigs are mostly bred on the premises, 1830–3, 1993. Other pig feeders buy from the farmers and sales, and principally Edinburgh market, 1832–6, 1975. Believes many veterinary surgeons are not capable of diagnosing swine fever, 1838–41, 1923. It must be learnt by experience, 1839–40. The common idea in his district is that the disease is most prevalent about September, 1842–3, 2035–6. Store pigs bought for the potato digging may have an influence, 2037–8. Attributes the present immunity from disease in his district to the policy adopted of stamping out and disinfection, 1846–7. Compensation was paid for diseased and in-contact swine, 1848. The disinfecting has been done at the owner's expense, 1854–7, 1952–8, 2000–4. In one or two cases, the local authority have paid for disinfection, 1953–8, 2001–2. Thinks the inspection of carcases at Edinburgh slaughter-houses is too severe, 1858–66, 1995. Carcase slightly affected with swine fever and tuberculosis might be passed as human food, 1864–5, 1994–7. Does not think there is concealment in his district now as it is known that good compensation will be given, 1868–71. That pleuro-pneumonia was stamped out was, in a great measure, owing to the good compensation given, 1869. If the owners in his district are fairly dealt with, believes they would give every assistance in stamping out swine fever, 1872. There have been two or three prosecutions for non-reporting, but the local authority do not wish to be too strict, as it does not do much good, 1873–6, 2042. The police are paid a trifle for superintending a case, 1877–80, 1898. The size of the infected area necessary, depends entirely on the circumstances of the case, 1883, 2107–13. Has managed his outbreaks without declaring an area, 1884–7. In places where swine fever is liable to break out, a local veterinary surgeon should be retained at a small annual fee to keep upon the alert, 1889–90. If the Board of Agriculture undertook the compensation and general oversight, the present machinery could cope with the disease, 1891. The main objection now is the heavy tax on ratepayers, 1891. Witness always gets permission from the local authority to slaughter, 1894–6, 1980. Witness values the animals, 1897–8, 2045–7. Makes sufficient *post-mortem* examinations to satisfy himself, before declaring an infected place, 1899–1910. *Post-mortem* appearances, 1909–12, 1935–7, 2115–27. The pigs are taken to the slaughter-house in floats, there is no alternative, 1902–4, 2043–4, 2095. Does not think swine fever cases ought to be treated professionally, 1916–8. Has never treated any himself or known of a case treated, 1919–21. In his district infected places are closed for 30 days, sometimes longer, 1928–9, 1990–2. Thinks six or seven weeks would be better, 1930, 1991. Thinks the maximum of compensation should be extended to 5*l.* or 6*l.* for healthy pigs, 1931–4. Apparently healthy pigs, when slaughtered are sometimes found affected with swine fever, 1935–7. The County and City of Edinburgh act independently of each other in making regulations, 1938–9. Not many of the suspected cases are found not to be swine fever, 1940. Has not had experience in swine erysipelas or endocarditis, 1948–51. It is not his duty to inspect pigs unless disease is reported, 1966–8, 2074. The police report to him, 2072–5. In some cases pigs have died before he is called in, 1969. It is not his place to trace the origin of an outbreak, 1973, 2067. Thinks it is the duty of the police, 2068, 2135–42. Dealers' carts might carry the disease, 1975, 2024–5. Pigs from abroad are not imported into his district, 1978. Would recommend an impermeable floor in every sty, 1985–6, 2017–20. There should be surface drains only in a sty, 1989. Disease has seldom recurred in premises that have been disinfected and closed for 30 days, 1991. The organs should be sent to the central authority for diagnosis, 2005, 2012. The lungs, stomach, and intestines, a few lymphatic glands, and the heart, should be sent, 2007. They should be sent hermetically sealed, 2009–11. Travelling boars are likely to carry disease, 2026–7. Owners of boars should be licensed, 2027–31. Does not think it is the practice of the Midlothian police to trace the origin of an outbreak, 2069–70. There are dairies in his district in which pigs are kept, 2087–9. There is a difficulty in burying pigs on the premises in his district; he has been compelled to do this, but objects to the practice, 2093–5. There are seven or eight inspectors in Midlothian, 1979, 2096. There is a want of uniformity in dealing with swine fever, 2099. It is as dangerous not to have uniformity within a county, as it is among the counties at large, 2100. The most effectual means of stamping out the disease are slaughter, compensation, sanitary precautions, and restriction on movement, 2101–4. The carcases of diseased pigs are burnt at the Edinburgh slaughter-houses, 2106. On two or three occasions infected areas have been declared in his district, 2112–3. In every case the central authority should decide as to the existence of swine fever, 2128–34. His local authority has always dealt liberally with their inspectors, 2140–2. The principles of the Public Health Act should be applied to the keeping of pigs, 2151–4. At one place in his district the average number of pigs kept for the last two years has been 250, 2156–60. The owner of this place has never had swine fever, 2161. Attributes this to the fact that the owner breeds his own pigs, 2162.

DEALERS. *Duguid* 10, 34–6, 82, 94, 400, 419; *Howard* 201–5, 221–2, 241–6; *Sanders Spencer* 602–4, 763; *Benjafield* 1187; *Redman* 1276–7; *Christian* 1555–6, 1581, 1583–5; *Hamersley* 1657, 1729–30, 1743–4, 1762; *Cunningham* 1975, 2024–5; *Dixon Brown* 2470–1; *Carroll* 2669–71, 2704; *Hedley* 2830; *Garratt* 3875, 3959–63, 3297–9, 3305–6; *Sewell Read* 4224, 4292, 4297–8, 4304, 4322–3; *Duckham* 4406; *Wood* 4505–7, 4515–20, 4534, 4558–9, 4565–6, 4579–80, 4603–4, 4637, 4645–7, 4690; *Russell* 4745, 4858; *Crofts* 4877–81, 4892–8, 4908, 4913–7, 4945, 4961–2, 4986–9, 5105–15, 5163, 5171–5, 5179–86; *Stephenson* 5376; *Tennant* 5414; *Dunne* 5726, 5729, 5754, 5809–18, 5829–33, 5854–5, 5901–4.

DIAGNOSIS OF SWINE FEVER. *Duguid* 87, 329–35, 406–7, 447, 451–8; *Howard* 205–6, 261–6, 271–3, 310; *Sanders Spencer* 490–2, 505–6, 521, 555, 626, 642, 752–5; *Walley* 787, 853, 886–933, 939, 941, 962, 1027, 1056–76; *Benjafield* 1119, 1133–4; *Redmon t* 1231–4, 1250–2, 1270; *Christian* 1584–9, 1614–5; *Hamersley* 1675–7, 1715–17; *Cunningham* 1785, 1838–41, 1909–12, 1923, 1935–7, 2005, 2012, 2114–27, 2128–34; *Dobbie* 2231, 2235, 2328–30, 2358, 2364–9,

DIAGNOSIS OF SWINE FEVER—*cont.*

2384–95; *Carroll* 2545–6, 2584–5, 2621–8, 2636, 2764–7, 2776–9; *Hedley* 2810–3, 2837, 2851–5, 2870–2, 2909, 2952–64, 2973; *Prentice* 3198–226; *Axe* 3365, 3371–2, 3387–91, 3408–40, 3463–89. 3517–45, 3577–601; *Newsom* 3632–4, 3691–718, 3732–6, 3820–2, 3836, 3840–59; *Garrett* 4072, 4078–9; *Sewell Read* 4239, 4366–8; *Russell* 4703; *Crofts* 4964–77, 5061–86, 5120; *Stephenson* 5280–8; *Tennant* 5509–10, 5576–80, 5696, 5710; *Dunne* 5766, 5801, 5881.

DIRT, INFLUENCE OF, ON SPREAD OF SWINE FEVER. *Duguid* 142, 424. 446; *Howard* 175–80, 239–40; *Sanders Spencer* 508, 676–8; *Walley* 771–2, 960, 1001–2; *Benjafield* 1117–20, 1134, 1175; *Christian* 1423–6; *Hamersley* 1465, 1540; *Cunningham* 1655–6, 1748; *Dobbie* 1779, 1976; *Dixon-Brown* 2407–8; *Carroll* 2547–9, 2590; *Hedley* 2814–5; *Axe* 3368–9; *Newsom* 3642; *Sewell Read* 4236; *Duckham* 4427; *Wood* 4547–50; *Russell* 4714–9, 4744, 4758, 4767–71, 4817; *Crofts* 4996; *Stephenson* 5333; *Dunne* 5823.

DISINFECTION. *Duguid* 19, 67–8, 77, 90, 94, 145, 438; *Howard* 277–8; *Sanders Spencer* 647–9; *Walley* 957, 993; *Redman* 1203, 1300; *Christian* 1564–1586; *Hamersley* 1725–8, 1736–9, 1773; *Cunningham* 1785–8, 1854–7, 1924–7, 1987, 1991, 2000–4, 2014–6; *Dobbie* 2287–8; *Dixon-Brown* 2407–8, *Carroll* 2589, 2994–6, 2641–51, 2659; *Hedley* 2827–9, 2997–3010, 3039–42, 3053–8, 3084–7, 3331–43; *Prentice* 3181, 3192; *Axe* 3552–7; *Newsom* 3737, 3746, 3825–6; *Garratt* 4066–8, 4021–4; *Sewell Read* 4224, 4266, 4031–6, 4322–3; *Russell* 4696, 4764, 4766, 4780, 4808–13, 4818, 4840, 4845; *Crofts* 4881, 4904–12, 4919–39, 4996, 5012, 5027; 5038–60, 5109–12, 5129–34; *Stephenson* 5274, 5276–7, 5292–8, 5321, 5340–8, 5357–63; *Tennant* 5402, 5414, 5425, 5433, 5464, 5495–8, 5570; *Dunne* 5727–8, 5731, 5746, 5762, 5824–8, 5856, 5867–70, 5894, 5905–6.

DIXON-BROWN, REVEREND DIXON. (Analysis of his Evidence):

Chairman of Executive Committee, Northumberland, 2396–7. Practice adopted by the county in dealing with swine fever, 2398. The Executive Committee has delegated some of its powers to a Sub-Committee in each of the petty sessional divisions, 2398. All in-contact as well as diseased pigs are slaughtered, 2398. The policy pursued has been most successful, 2399. In two instances the Executive Committee applied to the Board of Agriculture to declare large infected areas of 50 and 65 square miles respectively, 2399, 2450–3. Gives details of an outbreak which occurred lately at Morpeth Asylum, 2400–2, 2463. They have experienced a difficulty in dealing with swine fever, owing to want of uniformity of practice of neighbouring authorities, 2403. Disease has come into their county from Durham, where they have not the same restrictions as Northumberland, 2403–4, 2540. They have scheduled Durham and other counties, 2404. They have had difficulty in these colliery districts, 2405, 2450. It would be a very serious matter if swine fever broke out among the pigs owned by pitmen, as in a pit village numbers of pigs are close together, 2405. Thinks it would be desirable to arm county authorities with more drastic powers in regard to inspection of pigsties, 2406. His local authority, owing to the filthy condition of some pigsties, have not allowed pigs to be brought into them until they were properly constructed, 2407–8. There are places in the county not yet declared free, 2407, 2534–6. They have not a medical officer of health for the whole county; they have officers for different districts, 2409–10. As regards swine fever, witness is content with the powers they now possess, and sees no advantage in having a county officer to overlook minor authorities, 2410–13. Thinks the maximum of 4*l.* is too small, would extend it to 10*l.*, 2414, 2444–9, 2484–7. In one instance where the owner received 4*l.* for a pig, the local authority sold it for 7*l.*, 2414, 2440. Is not aware that under sec. 30 of Act 1878, they were under the obligation to pay the owner the excess in salvage, 2442–3. The County Acts for the boroughs of Morpeth and Berwick, and the borough of Newcastle works harmoniously with the county, 2415–6, 2469, 2494–6. At one time the county used to compensate for pigs which had died if the owner gave notice, 2417, 2436, 2514–7. The Government auditor now disallows this payment, 2418–9. They would like to have discretionary power given them to pay compensation for animals which had died and been reported, 2419, 2437–9. Is in favour of the

DIXON-BROWN, REVEREND DIXON—*cont.*

Board of Agriculture dealing with swine fever, 2420. What is wanted is uniformity, 2420, 2537–9. Would leave the appointment of inspectors in the hands of the local authorities, 2421. Would allow the Board of Agriculture to appoint inspectors when necessary, 2422–3. The principle of compensation is important, 2424. It ought to be on a liberal scale, 2425–35. The two large areas declared had great effect; they had excellent boundaries, 2399, 2453–7. Movement was restricted in, into, or out of these areas, 2457–8. Attaches great importance to restriction of movement, 2459. They have generally been able to trace the origin of the outbreaks in Northumberland, 2460–1. Does not recollect a case traced to Ireland, 2462, 2483. Does not know of swine fever having ever come from Bedfordshire, 2464–5, 2497. They do not allow pigs to come from the borough of Bedford, 2498–2500. Although there is a large weekly market in Newcastle, no great amount of disease in the county has been traced to this market, 2466–8, 2480–3. Has a strong suspicion of pig dealers, 2470. Outbreaks have been traced to them, 2471. Thinks the system in which they have dealt with swine fever, cannot be improved upon, 2473. In no instance has the disease spread after they have discovered it, 2474. Slaughter alone is of some value, but it should be accompanied by compensation and restriction on movement, 2475–6. These with proper sanitary requirements would assist in exterminating the disease, 2477. Thinks swine fever may be exterminated as readily as foot-and-mouth, pleuro-pneumonia, and cattle-plague, 2478–9. At Morpeth Asylum they breed a large number of pigs, 2488. His local authority have prosecuted owners for not giving notice, 2489–91. The necessity for this does not happen often, 2490. Compensation was withheld in the cases where they prosecuted, 2492. In some cases death from the disease has been too sudden for the owner to give notice, 2493, 2514–7. Except for special purposes of breeding they interdict pigs coming from any county where there is swine fever, 2501–2. They import pigs from few counties, 2503. Amount of compensation paid in, 1890–2, 2504–9. The police are paid their travelling expenses, and anything extra they incur, 2510–11. They have one veterinary inspector for the whole county, he is paid a salary, and has certain allowances, 2511–3. They have a special account at the bank, from which the clerk of the county council can draw compensation, this is to obviate the hardship of owners waiting three months for their compensation, 2518–25. There are more suspected than real outbreaks in Northumberland, 2526–8. 233 in-contact animals have been slaughtered by the local authority in eleven years, as many or more have been killed by the owners, 2530–3. It would be a great improvement if many of the minor jurisdictions could be merged in the larger ones, 2537–40.

DOBBIE, JOHN (Analysis of his Evidence):

Has acted as Deputy-Chairman of Contagious Diseases Committee of Midlothian, 2163. Has given attention to swine fever, 2164. Mode of procedure in dealing with swine fever in Midlothian, 2165–71, 2182–93. The action of the local authority has not been uniform in all cases of outbreak, 2172–9. Owing to the loss sustained in the large outbreak in Dalry meadows and Gorgie district in March, 1892, the slaughter of in-contact swine by the local authority was stopped, 2173–82, 2187–2260, 2311. In one case they gave 302*l.* 15*s.* for 231 pigs, and only received 66*l.* 17*s.* as salvage; in another case 204*l.* was paid for healthy in-contact pigs, and only 73*l.* salvage was received, 2174. The bulk of these pigs were condemned for tuberculosis, 2174. Diseased pigs have always been slaughtered by the local authority, 2175–80. The owners killed and sold the remaining healthy ones, or they remained in the owners' hands, 2180, 2283–5. There are eleven veterinary inspectors in Midlothian, 2184, 2227, 2274. Mr. Cunningham was most stringent in adopting slaughter, 2185. The action taken depends to a certain extent upon the veterinary inspector, 2186, 2259. The local authority of Midlothian have no regulations as to slaughtering pigs, 2187. The local inspectors have no powers, 2189–91. They have no power of knowing disease exists, 2191. The police on receiving information of a suspected outbreak report it to the local inspector, 2165–7, 2192. Does not know of the police having been used to trace the origin of an outbreak, 2193. Is not aware that

DOBBIE, JOHN—*cont.*

the local authority endeavour to trace outbreaks to their original source, 2194, 2376. The universal opinion is that the disease in the county comes from the town of Edinburgh, 2194–7. Swine fever is comparatively unknown outside four miles from the city, 2194. The maximum compensation for in-contact animals is not sufficient, the animals value up to 7*l.* should be given, 2198–2211, 2256–8. The amount for diseased pigs should be raised under special circumstances, 2205–20. In 1892 they had 19 outbreaks, costing 1,059*l.* 6*s.*, out of which they received as salvage 221*l.* 14*s.*, 2199, 2308–9. The police get a lump sum from the County Council for their services to the County Council, but are not paid individually for dealing with outbreaks, 2,200–3. Every person who keeps a pig should be licensed, 2221–3, 2262–5, 2289–94, 2335–6. Compensation should be paid out of an Imperial Fund, 2224, 2254–5, 2390–4. Knows that disease is not reported, 2226. There should be power of entry to inspect piggeries, 2227–8. Swine fever should be dealt with by the Board of Agriculture in the same way as pleuro-pneumonia, 2229–31. If the Board pay the compensation they are entitled to be referees as to diagnosing the disease, 2231, 2358. 2363. There has been considerable friction between Midlothian and the Board with regard to dealing with pleuro-pneumonia, 2232–4, 2237–41, 2251, 2295–2301, 2346–50, 2370. This friction would not be allayed if pigs' entrails are sent for diagnosis to London, 2235, 2328–30. The size of an infected area should be left in each case in the hands of the inspector, 2242–5, 2302. There would be no need to schedule a county, or even a large portion of it, and it would be a great hardship, 2246–8, 2261. The Board of Agriculture have been perfectly successful in dealing with pleuro-pneumonia, 2249–50, 2253, 2296–7, 2324–8. The friction which arose was originally owing to the lungs of cattle being sent for diagnosis to London, and to the Board not taking their views, or consulting the local authority, 2238, 2252, 2346–7, 2370–5. There are thousands of miners in Midlothian. They buy their pigs in Edinburgh market, 2263. The county have never prevented this by scheduling Edinburgh, 2266–70. They have no regularly appointed valuer, as a rule, the veterinary inspectors value the pigs, 2271–5. The local inspectors have power to value and order slaughter, 2275–6. There are no sub-committees of the executive committee, 2277–82. Witness visited all the infected places himself, 2282. They always keep infected places shut for 30 days, sometimes longer, 2286. The owners pay for disinfection, 2287–8. Believes swine fever can be conveyed by rats, men, and bad drainage, &c., 2304–7, 2310. After slaughter of in-contact pigs was stopped, they found they were doing as much good without it, 2311–12. Has known a recurrence of swine fever within three months in a place that had been washed, cleaned, and cemented, 2312. Mr. Cunningham has a larger number of pigs in his division than there are in any of the other divisions, 2313. Mr. Cunningham was successful in stamping out the disease, because he pulled down the sties and had new ones built at the owners' expense, 2314–20. If they had not done this they would not have been allowed to restock their premises, 2315–20. They have prosecuted either once or twice for the non-reporting of disease, 2321–23. There should be a representative of the central authority in Edinburgh for diagnosing disease in Scotland, 2327–34, 2364–9, 2384–95. Believes there are there two kinds of swine fever, 2328–44. One kind is difficult of detection in the living animal, 2343, 2387–9. Is not aware of any swine fever having been introduced by pigs from England or Ireland, 2351. Thinks the present machinery they have for working swine fever in Midlothian is sufficient, 2228, 2352–61. If the Board of Agriculture dealt with the disease, their eleven local inspectors are quite competent to detect and report it, 2352–3. Their inspectors are allowed a free hand as to the number of visits; they pay and are paid from 5*s.* to 10*s.* a visit, 2377–81. Does not think it necessary to send the entrails of pigs to a central authority for diagnosis, 2387.

DUCKHAM, THOMAS (Analysis of his Evidence):

Is chairman of Executive Committee of County of Hereford, 4397–9. Their policy for several years has been to keep the county closed against swine from other counties except by licence for slaughter or breeding, 4401–3. The borders of Hereford are very

DUCKHAM, THOMAS—*cont.*

serrated, 4401, 4480–6. They pay half price for diseased and full for in-contact, 4404. Their policy has been successful, 4405, 4467. Occasionally they have had an outbreak, but they have not been able to trace them, 4405–6, 4423–5, 4455, 4468, 4475. Pig dealers as a rule are unprincipled, 4406. The boundaries are difficult to watch, and pigs, no doubt, are surreptitiously brought in, 4405–12, 4455. If other counties had adopted their principle, witness believes the county would be free from swine fever, 4413. The difficulty is to get so many local authorities to adopt one principle, 4414, 4446–7. A central authority should deal with it on the same principle as pleuro-pneumonia, 4415–6, 4448–50, 4469. There have been severe outbreaks in the city of Hereford, 4417. The city works loyally with the county, 4416, 4442–3. Their rule has been to have a cordon of half-a-mile from the centre of the outbreak 4418–20. They have prosecuted many parties for bringing pigs into the county against the regulations, 4421–3. Thinks it desirable to amend the law regarding sanitation in regard to pigsties, and to give county authorities power to intervene if local sanitary authorities did not do their duty, 4426–37. Thinks sanitary authorities have sufficient power to keep premises clean and they look into these matters more closely now than formerly, 4428–34. Quotes an outbreak which extended to filthy premises, 4427. Thinks the appointment of a county officer of health should be made compulsory, 4438–9. There is only one borough in the county, 4440–1. Attaches great importance to uniformity of action, 4444. With uniform slaughter of diseased and in-contact pigs, compensation restriction on movement, and disinfection, the disease could be got rid of without trouble, 4445–50, 4469. They have two veterinary inspectors, one for the county and one for the city, 4451–2. Attaches importance to restriction on movement in districts where swine fever is, 4453–4. They have never closed a place for more than 28 days, and have never had extension of disease from any of the centres of disease, 4456–7, 4468–9. Would extend the limit of compensation to 5*l.*, 4458–66. Does not now breed swine; but, when he did, never had swine fever, 4470–3. There have only been about 20 cases in the county in the last few years, 4474. Hereford is chiefly a breeding county, 4476–7. In forming an infected area, the configuration of the boundary is taken into special consideration, 4480–1. Many farms are half in and half out of the county, 4401, 4480–2.

DUGUID, PROFESSOR WILLIAM. (Analysis of his Evidence):

Is assistant inspector to Board of Agriculture, 1. Has paid particular attention to swine fever and other contagious diseases for 16 years, 2. History of swine fever prior to legislation thereon, 3. Steps first taken to deal with swine fever in 1878, 4. History of the disease, legislation thereon, and its effect since 1878, 5–110, 389–93. Restrictions on movement owing to foot-and-mouth disease had a great effect in reducing outbreaks of swine fever, 5–9, 14. Restriction of movement has always had a beneficial effect in checking spread of swine fever, 10–13, 16, 43–46, 74–6, 94, 114–8, 353. Want of uniformity of action on part of local authorities, 17–18, 60–1, 82, 359, 413. Order for compulsory slaughter revoked in 1884, 19–23, 26, 355. Outbreak of swine fever in the New Forest, 27–38, 80–1, 398. Increase of the disease in 1885, 39, 40. Markets and fairs, order of, 1885, 41–47, 54. Slaughter of diseased pigs and healthy ones in contact made compulsory, 48–54, 57, 60, 354–5. Swine fever in Wales and Scotland in 1885, 57. Improvement in condition of markets and sale-yards, 58. Swine fever seemed to increase under Compulsory Slaughter Order, 59, 356. Sales in Districts Order, 62–5. The Animals Order of 1886, 66–8. Report on swine fever by Professor Brown, 69. Contagious Diseases (Animals) Act Amendment, 1886, 70–1. Swine fever increased in 1887, 72. Increase of repositories owing to restrictions on markets, 78–9. Trade in "piners," 83. Decrease in swine fever in 1888, 84–5. Few local authorities carried out slaughter promptly and paid compensation, 86, 88, 97, 108–10, 354–9. Many cases reported which were not swine fever, 87, 376–7. Animals Amendment Order, time within which an inspector could declare an infected place, extended to 21 days, 89–90, 94. Orders authorising local

DUGUID, PROFESSOR WILLIAM—*cont.*

authorities to regulate sale of swine, 90–2, 95. Decrease in swine fever in 1889, 93. Leaving diseased pigs alive a source of danger, 97–8. *Post-mortem* examination required by Order (3980), 99–100. Decrease in swine fever in 1891, 102. Returns of swine fever for 1892, 104–10. Outbreaks not reported, 106–7, 123–9, 131, 443. Difficult for local authorities to get information of disease when compensation is not paid, 111–13, 122–9, 363. Increase and decrease in the disease does not appear to depend on the season of the year or temperature, 114–8. Prosecutions, difficult to obtain conviction, 119–20. Board of Agriculture get no returns of number of prosecutions, 121. When the number of recoveries shown in the returns is large, probably the disease is not swine fever, 130, 348. Swine fever, very contagious, 132, 524. Nature of the disease, 132–8, 140–1, 151, 346, 422. Recoveries from it only amount to 8 or 10 per cent., 139, 347, 408–9. Dirt tends to keep alive infective material, 142. When swine fever occurs in towns where there are numerous pigsties it is difficult to eradicate the virus, unless sanitary regulations are efficiently carried out, 143–4, 424–5. The best means of eradicating the virus, 145, 438. Dealers' carts are a fruitful source of mischief, 146. Difficulty of enforcing regulations for disinfection of carts, 147–50. Difference between swine fever and other contagious diseases, 151–3. Would be exceedingly difficult to stamp out swine fever in the same way as pleuro-pneumonia has been stamped out, 152–3. Evidence of an outbreak among fresh pigs in a place six weeks after diseased pigs had been removed therefrom, 325–6. Swine fever has been produced by inoculation and by feeding with food mixed with the bacillus, 327–8, 336. Diagnosis of the disease from its early symptoms extremely difficult, 329–35, 406–7, 447. An inspector has to declare the existence of swine fever before he slaughters, 334, 428–32. Protective inoculation has been tried in the United States, but it apparently was a failure, 337–9. Other diseases closely allied to swine fever, 340–4. "Rouget" and erysipelas should be dealt with as swine fever, 345. Swine fever in other countries, 349–50, 391–5. The only protection against introduction of swine fever from abroad is to slaughter at ports of landing, 351, 387. This is practically done with reference to countries where swine fever is known to exist, 352, 396–7. Thinks stoppage of movement should be combined with slaughter, 353, 414–8. Result of ceasing to slaughter and compensate invariably tends to reduce number of reported outbreaks, 360. Little risk of detection where disease is not reported, 361. There is no inducement to give notice of disease when compensation is not paid, 362–5, 400. It is desirable to give compensation in order to get disease reported, 366–8. Advantage of this found in dealing with pleuro-pneumonia, 368–71. Special care should be taken by central authority to identify disease if they undertook to extinguish the swine fever, 372, 375, 378–80. Adoption of same means of identification as in pleuro-pneumonia impracticable, 373. A modification of the pleuro-pneumonia scheme might be practicable, 374. An enormous staff would be required if the principle of slaughter were adopted over the whole country at once, 381, 384. Movement should be restricted as a preliminary measure, 383–4. The assistance of local authorities is absolutely necessary, 385–6. Thinks the disease can be got rid of, but it would take time and money, 387–8. Believes there is a considerable amount of concealment, 399. Due to want of compensation, 400–4. Several communications have been received, urging a higher maximum of compensation, 401–5. The maximum should be higher, 415, 419. Attempts have been made to cure the disease by treatment, 410. This is seldom done owing to comparatively small value of pigs, 411–12. Difficult to get dealers to report disease, 400, 419. Indian and other foreign corn might carry infection, 420–1. Full compensation should be given for healthy contact swine killed, 423. Swine fever cannot be produced by insanitary conditions, 424, 446. Infected places should be closed for 56 days, 426–7. In *post-mortem* examination the lungs, stomach, and intestines should be examined, 433–4; more difficult and dangerous to send these to central authority than pleuro-pneumonia infected lungs, 435–7. Disinfection of dealers' carts, 438. There should be none but surface drains in any place where animals are kept, 439–40. Has had no experience of sewerage fever, 441–2. In many markets the inspection is almost *nil*, 444–5, 448. A discoloured skin is not diagnostic of swine fever, 451–6. External symptoms of the disease, 455. Lung lesions of swine fever generally associated with bowel lesions, 453–8. It would be very difficult to carry out inspection of private slaughter-houses, 459. Inspection is carried out in public slaughter-house, 459–62. It would be difficult to license all piggeries, 463–6. Has never seen the lesions of this disease in other animals, 467. Rats can carry the contagion, 468. Great care would have to be taken in compensating for destruction of pigsties, 469. Cannot say if the flesh of a diseased pig at once becomes unfit for human food, 470. Thinks if county councils were given power of inspection of piggeries over the heads of smaller authorities it would be a step in the right direction, 471–81.

DUNNE, JOHN (Analysis of his Evidence):

Chief Constable of Cumberland and Westmorland, 5720. Was at one time Chief Constable of Newcastle, 5721. Has had a very varied experience of dealing with diseases of animals, 5722–3, 5871–5. There are two independent jurisdictions in Cumberland, viz., Carlisle and Workington; one in Westmorland, viz., Kendal, 5724. The boroughs work in harmony with the counties, 5864–6, 5883–5. There was no swine fever in either of the counties previous to 1887; 5725. From 1887, to April 1888, there were four outbreaks in Cumberland, three in Carlisle, and none in Westmorland; gives particulars, 5725, 5727, 5770–1, 5788. From 1887 to 1891, 26 cases of suspicion were reported; gives particulars, 5725, 5727, 5766, 5848–9. Particulars of an outbreak which occurred near Keswick, 5726, 5754–5, 5787. This was caused by a dealer from Bedford, who was convicted and fined, 5726, 5754, 5809–18. The Police at Bedford were unable to trace the disease to this man, so witness sent one of his own superintendents down to Bedford, who traced it, 5726. There has been no disease for five years in Cumberland, and for seven in Westmorland, 5726. History of an outbreak at Messrs. Hetherington's Auction Mart, Carlisle, 5727, 5770, 5838–40. The Board of Agriculture should have control of the measures for stamping out swine fever, 5728, 5889–91, 5894. It can never be done otherwise, 5728. A uniform system of slaughter of diseased pigs, isolation, and careful disinfection would be successful, 5728, 5856, 5894. Licensing dealers and auctioneers would be a security, 5729, 5832. Dealers and auctioneers should be made to keep a register of purchases and sales, 5729, 5829–33, 5854–5, 5901–4. It would be difficult to license pig-keepers, 5730, 5833, 5852–3. The duty of disinfection should lie more with the authorities than the owners, 5731, 5824–8. Stringent measures, under his administration, have been successful in stamping out cattle plague, foot-and-mouth disease, pleuro-pneumonia, &c., in Cumberland and Westmorland, 5732–7, 5847, 5856, 5882. Principal markets and auctions in his district, 5738. These markets, with two exceptions, and the auction marts are paved, 5739–42. His local authorities always schedule known centres of disease, 5743–5, 5808–13, 5851. Provision is made in their regulations (scheduling counties) for farmers who may have holdings in two counties, 5743–5. Attaches great importance to maximum safeguards with minimum inconvenience and loss, 5743. Precautions taken in disinfecting premises, 5746, 5867–70. Disinfection has been at the expense of the county, 5905–6. Makes it a rule to trace the origin of outbreaks where possible, 5747–8. This is done by the police, 5748. Beyond actual expenses for travelling and subsistence, &c., the police get no extra pay for work in connection with outbreaks, 5749. Thinks a small sum of money would be an incentive, 5750. In cattle plague time the police were employed night and day guarding two frontiers, and were allowed 21*s.* a week extra, 5751–2. Extent of these two frontiers, 5752. For this purpose of guarding they had 145 additional men, 5753. Thinks there is concealment, but thinks it is owing to a desire on the part of owners to get the best price for their pigs before reporting, 5756. This does not apply to his counties, 5841–2. In some districts they attach no importance to swine fever, 5756, 5814–5. The people in Cumberland regard it as a serious matter, 5757. A large number of pigs are

DUNNE, JOHN—*cont.*

bred in Cumberland, 5758. Is not aware of any lairs in the towns, except those that are under control of the market authorities, 5759, 5763. Has not known disease break out in the lairs during last seven years, 4764–6. Pigs are brought by rail, road, and cart to Carlisle market, 5760, 5850. The exemption from disease has increased the value of the pigs in the two counties, 5760–1, 5804–5 Carts used for taking fat swine to markets, stations, etc., are washed and swept, 5762. His chief veterinary inspector says the disease after a *post-mortem* is not difficult to detect; other veterinaries differ, 5766. In tracing outbreaks they have only been successful up to a certain point, 5767. The disease in their districts has always been brought in from outside, 5768. Irish pigs are not so dangerous as Scotch and English, 5769–71, 5777, 5898–900. A great number of diseased pigs go out of Scotland, 5769–70. Describes the trade in Irish pigs: it is not so great now as it was, 5772–7, 5860, 5898–900. Thinks there is a general feeling in favour of the Board dealing with swine fever, 5778–9, 5798–800. This favourable feeling is due in a great measure to the success with which they have dealt with pleuro-pneumonia, 5780, 5799. Full market value up to 6*l.* or 7*l.* should be paid for in-contact pigs; would give two-thirds of the value for diseased pigs, 5781–7. Disease is more likely to break out among large herds than individual pigs, 5796. They slaughter both diseased and in-contact pigs in his counties, 5791–5. He would allow the owner the option of slaughtering the in-contact pigs, 5796–7. Diagnosis of disease should be in the hands of the Board of Agriculture, 5801. Thinks it would be an advantage for the Board to appoint a competent veterinary surgeon responsible for a group of three or four counties, 5801–2. The police would do just what they now do, 5803. His two counties have always imported swine, but do not to the same extent now as formerly, 5806, 5860. A great many come from Scotland, 5860–3. Witness has discretionary power to refuse a license for removal from another county into his counties, 5809–13. It would be advisable to put all pig-sties under supervision of the local authority, and subject to inspection by the Board's officers, 5816–28. The cow-sheds are under the sanitary authorities, and in some districts they do nothing, 5817–22. They have carried out a system of isolation of 14 days, and in no case has the disease spread, 5746, 5834–5, 5870. In all their outbreaks the size of the infected place varied, but was contracted as much as possible; there was no half-mile circle, 5835–7. System of supervision adopted for finding out if disease exists, 5841–9. They have a veterinary inspector in each petty sessional division; they are paid by fees and are all under one chief inspector, 5845–7, 5876–82. Barrow, in Lancashire, is the nearest port to Westmorland where pigs are disembarked, 5857–8. Some of the local veterinaries are often wrong in their diagnosis, 5881. The failure of other counties to stamp out disease has been entirely their own fault, 5886–8. The local authorities should retain all the powers they now have in regard to pleuro-pneumonia, and should aid the Board, 5891–5. The Board might rely upon the important aid of the police, 5896.

ENDOCARDITIS. *See* ERYSIPELAS.

ENTRY, POWER OF. *Redman* 1375–9; *Dobbie* 2227–8, 2290; *Dixon-Brown* 2407; *Carroll* 2587–8, 2637–40, 2674–5, 2684–6, 2731–2; *Treadwell* 3312–14; *Russell*, 4714–9; *Tennant* 5463–5.

ERYSIPELAS. *Duguid* 345, 395, 454–7; *Sanders Spencer* 505, 622, 738; *Walley* 843, 900–8, 944, 1010–2, 1077–81; *Cunningham* 1948–51; *Hedley* 2925, 2974–6; *Axe* 3541–5; *Newsom* 3860–2; *Crofts* 4970–2, 5087–95; *Stephenson* 5272.

EXAMINATION. *See* POST-MORTEM.

GARRATT, RICHARD DAN (Analysis of his Evidence):

Is a dealer near Ampthill, in county of Bedford, 3875, 3882–3993. Used to keep breeding sows, but now buys in the district, and charges a commission, 3878–80, 4121. The present local regulations miss the mark altogether in preventing swine fever, 3881, 3890. Buys only in Herts and Beds, 3883, 3915, 4034–7. Dares not buy in Huntingdonshire or Cambridgeshire, 3884, 4180–5. As in these places if a pig is sick it is sent to a market or fair, 3885, 4183. Witness buys from farmers where the pigs are all right, 3886, 3915–22, 3925. In an auction he does not know whose pigs he is buying, or where they come from, 3886, 4133–4. The restrictions in other counties, prohibiting movement in, are a hardship on those who do their business carefully, 3887–8, 3900–8, 3956–7, 4038. Witness hardly ever buys in a market, 3886, 3998–4008, 4080–96, 4190. Counties which prohibit pigs from Bedfordshire, 4122–3, 4148. Complains of prohibition of movement, 3889, 4147–8. Restrictions ought to be confined to markets and infected places only, 3890–9. Knows that people when they have sickly pigs send them to markets or sales, 3892, 5902, 3909, 3910–4, 4051, 4131–4, 4164. Every pig sold in a market or sale, ought to be sold under the owner's full name and address, 3896. If an outbreak occurs every pig on the place ought to be killed, and certain restrictions put on that place only, 3898–3904. Thinks it is necessary that other counties should protect themselves, but it should be only against pigs that no one knows anything about, 3902, 3906. Bedfordshire has a bad name for sending diseased pigs, 3909, 3953. It has suffered from people sending pigs about, knowingly wrong, 3912. Genuine buyers are afraid to buy at the markets, 3913. Does not buy all his pigs from the farmers himself, buys some from other dealers who also buy from the farmers, 3916–21, 3925–9, 4008–18, 4039–47. Knows there has been a good deal of swine fever lately in Herts and Beds, 3923–4. In the three years previous to 1892, witness had only one case in which it was alleged disease had broken out in pigs sent away by him, 3931, 4069–70, 4112–3. He had a lawsuit, and it was proved they were all right when sent away, 3931–52, 4138–46. Thinks other counties have a right to protect themselves from Bedford while there are a lot of diseased pigs about the county, 3954–7. Protection against disease is wanted in Bedfordshire, 3958–9. Thinks a declaration sent with the pigs would be sufficient, and that with such a declaration they ought not to be prohibited by other counties, 3960–6. Though witness thinks other counties would not have the means of knowing whether the declarations were not based upon imperfect knowledge, 3967–9. Therefore it is wiser and easier for them to prohibit from the whole county, 3969–71. Witness has to send a declaration with pigs to Cumberland and Westmorland, 4038. Sees no objection to pig dealers being licensed, 3971–7. Sometimes brings pigs on to his premises and feeds them, 3978–81. As a rule, the money to purchase is sent him, and he sends off the pigs as soon as he can buy them, 3981–5. There is a difficulty very often in knowing what restrictions there are in a county, 3986–91, 4172–4. The police even are not always aware of the restrictions in their district, 3986, 3992. The principal markets in his neighbourhood are Bedford, Luton, and Hitchin, 3910, 3994. Pigs are bought in Bedford market to be kept in the country, 4006. His agent takes pigs to market, but witness does not think he ever buys at a market, 4009–18, 4135. Pigs are brought by road to the markets, and, as a rule, sent away by rail, 4019–30. There would be some fear of risk in this, 4032. Witness has not been to Bedford above twice in the last six or seven years, 4025, 4188–92. The pigs which remain unsold are taken home again, 4031–3. Does not know of a case of disease having been traced to his agent in the five years he has done business with him, 4045–7. Thinks it probable contaminated pigs might be on premises for a night, and not show or develop the disease, 4048–50. Witness does a large business with dealers and others in England, and also sends to Scotland, 4052, 4104–8, 4175–9, 4208–20. Pigs are hard to find at present, 4053. Witness generally sees all the pigs he sends away, 4055–62. His pigs are generally sent in crates which are returned, 4063–5, 4124–30. Every now and then the crates are washed and disinfected by him, but not by the railway company, 4066–8, 4201–4. An outbreak recently occurred among pigs sent by him to Cornwall, 4070–1. If witness saw a pig was not feeding, or appeared queer, he would not buy it, or any on the same premises, 4072–9. Thinks there is more than one contagious disease of pigs, or else it assumes different forms, 4078. Witness could not detect disease by external appearances, 4072, 4079. Last year witness, through an agent, bought perhaps 30 or 40 pigs in the open market, 4080–97, 4166–8, 4191. Witness sometimes buys pigs, and has them boarded out, 4099–4100. His business is mainly with

GARRATT, RICHARD DAN—*cont.*

store pigs, 4101–2. The only guarantee he gives to customers is that the pigs are healthy and feeding when sent, and have been near no disease, 4103–16. Has had pigs injured by delay on the railway, 4116. The Board of Agriculture should administer all matters connected with swine fever, 4117. Pigs are very dear now, and witness does not know how pigs of 10 weeks old can be bought for 12*s.*, as alleged, 4118–20. Pigs from Hertfordshire are prohibited by Bedfordshire, so witness has to send pigs bought in the former county from Hitchin Station, 4147. Thinks auction sales do the whole mischief as sources of disease, 4153–5. If people report to the police, they are not allowed to move pigs from the place, and the diseased pigs may be about for weeks, 4155. Had the disease on his premises seven or eight years ago, 4156–63, 4193–5. If compensation were given, the people would not smuggle diseased pigs off their premises, 4169–71. Does not know of any case of disease in the county for miles, 4187. The railway rates at the beginning of the year, prohibited them from sending pigs for a time, 4196–4200. It would injure him seriously if he sent away diseased pigs, 4205–7.

HAMERSLEY, COLONEL JOHN (Analysis of his Evidence):

Chief Constable of the county of Chester, 1635–6. The policy in his county for the last twelve years has been to slaughter all infected animals, but not in-contact ones, 1637–9. The question of slaughtering in-contact animals has been considered, but not adopted, owing to other and neighbouring local authorities not slaughtering, 1640–1, 1678. Some of the leading farmers consider that all in-contact animals should be slaughtered, 1640. Infected places are strictly looked after and closed for 28 days after the cessation of the disease, 1640. It is difficult to get borough authorities to move in the matter as they have not the same interests as the county authorities, 1641–4. There are several boroughs in Cheshire, 1642–3. These boroughs do not act in uniformity with the county in regard to swine fever, 1644. Would favour a measure which would tend to diminish these separate jurisdictions, 1645, 1673. The peculiarity of the county boundary known as the Maelor Hundred has caused great difficulty in regulating movement of pigs, 1646–54. Many agriculturists think swine fever may be caused by heating food and insanitary conditions, 1655, 1748. But it is probably due to an infective germ, 1681–97. Witness is not certain that swine fever has not a spontaneous origin, 1655, 1681. From January 1st, 1891, to February 28th, 1893, there have been 162 outbreaks of swine fever, of these 42 have been on premises where the animals were bred, and where the cause of the outbreak could not be ascertained, 1655, 1689, 1692, 1697, 1724, 1753–61. Filthy conditions tend to keep up the disease, 1656. Also the movement of in-contact pigs from markets, sales, &c., 1656. Thinks dealers' carts carry infection, 1657, 1729, 1762. Cheshire has regulations for the cleansing of dealers' carts, 1657–9. It would be a good thing if power were given to county authorities to regulate the construction and cleansing of pigsties, in the event of neglect in this matter by urban and sanitary authorities, but it would be difficult to carry out, 1660–72. There ought to be distinct supervision of the officers of local authorities in regard to dealing with swine fever, 1671–3, 1698–1702. Sees no reason why payment of compensation and valuation should not be left to local authorities, 1673, 1701–5. Tracing of disease to its origin is most difficult and should be left to the supervising authority, 1674. Quotes cases to illustrate this difficulty, 1674, 1692–7, 1722–3, 1759–61. Pigs are more difficult to trace than cattle, 1674, 1742. Does not think there would be any risk in sending portions of pigs for diagnosis to London, 1675–7. The movement of pigs into Cheshire from counties where there is swine fever is generally prohibited, 1678. If swine fever was dealt with by a central authority witness would recommend the slaughter of all contact animals, 1679–80. The most effectual way of stamping out swine fever would be to deal with it on the same lines as in the case of pleuro-pneumonia, 1706. The police are paid for the extra hours they are engaged on work

HAMERSLEY, COLONEL JOHN—*cont.*

connected with cattle diseases, 1707–14. Does not think swine fever is difficult to detect, 1715–17. A veterinary inspector is always called in, 1717–21. Markets are a common source of disease, 1724. Of the 162 outbreaks reported in the year 1891, 49 were amongst pigs bought from dealers, 39 in pigs from markets and auctions, 32 pigs bought from farmers, 1724, 1729. The markets in Cheshire are well paved and disinfected, 1725–28, 1773. Pig dealers should be licensed, and made to keep books to show where they got their pigs from and where they send them, 1730, 1743–4. Auctioneers have always rendered assistance in trying to trace out disease, 1730. There is a certain amount of concealment of disease in Cheshire, 1731. Compensation is paid for all slaughtered animals, 1732. Thinks the amount allowed acts hardly in some cases, 1733–4. If it were increased it would tend to diminish the number of concealments, 1735. Thinks if premises are thoroughly cleansed and disinfected they might be freed at once instead of keeping them closed 28 days, 1736–8. Thinks woodwork should be treated first with scalding water and then with a strong disinfectant, 1739. Thinks swine fever may be got rid of in the same way as pleuro-pneumonia, &c., but it will be more difficult, 1740–3. No Irish pigs are landed in his jurisdiction, 1745–7. Has never heard of separated milk being the cause of swine fever, 1749–50. Has known cases where carcases of pigs have been buried in manure heaps, 1751–2. In trying to trace the origin of outbreaks inquiries are made as to castrators and boars, 1755–8. When diseased pigs are buried properly in quicklime there is no risk of the infection being carried by dogs or rats, 1763–6. Quotes a case of what was said to be swine fever, which occurred on witness' farm, 1766–70. If local authorities had the administration of public funds, witness does not think undue favouritism would be shown, 1771–2.

HEDLEY, MATTHEW (Analysis of his Evidence):

Is Chief Inspector of the Veterinary Department, Privy Council, Dublin, 2806. Is Fellow of the Royal College of Veterinary Surgeons, 2807. Has given close attention to the diseases of animals, 2808–9, 2907. Origin and symptoms of the disease, 2810, 2952–64, 2973. "Symptoms of Disease" issued by the Veterinary Department, 2811–3, 2851–5, 2909, 2925–51. This was issued to awaken local authorities to take action, 2853, 2913–4, 2951, 3091–5. The term "swine fever" appears to cover more than one disease, 2810, 2908. Insanitary conditions are liable to spread the disease, 2814. Does not think insanitary conditions originate the disease, 2815. Introduction of newly purchased pigs into an old herd, are liable to spread disease, 2816–8. Methods of housing swine in Ireland, 2819. There has been a tendency on the part of owners through the Land Court to improvement in this respect, 2820–3. But the methods of housing swine are still very defective, 2819–23. Describes the course of trade in Ireland in regard to pigs, 2824–6, 3022–9. Regulations for cleansing under the Animals (Ireland) Order, 2827–9. It is rarely that the Board of Agriculture pass an order that the Irish Privy Council do not follow it as closely as possible, 2829, 2888–91. Thinks the local authorities do not enforce the powers given them with regard to cleansing of dealer's carts, &c., 2830, 3059–63. It would be desirable to enforce these powers, but thinks it would be met with strong objection, 2831, 3064–6. It would be desirable if it could be worked to license premises where pigs are kept, but it would be extremely difficult, as you would often have to define the cottage of the owner as a pigsty, 2832, 2877–9. In the towns there are regulations for the keeping of swine, 2832. There are 163 local authorities in Ireland, of which only seven have always paid compensation, 2833, 2866, 3015–6, 3078–80, 3105. The present system of dealing with swine fever is unsatisfactory, it can only be dealt with by a central authority, 2833–5. The regulations should be uniform as to compensation and general administration, 2834. Whether more than the place where the actual swine are, should be included in an infected place, can only be decided on visiting the place, 2834, 2897. The authority would therefore require its own officer in the vicinity of a place where disease was prevalent, 2834. Compensation in Ireland is partly out of the rates, and partly out of the General Cattle

HEDLEY, MATTHEW—*cont.*

Diseases Fund, 2834. Many local authorities decline to pay compensation to save the rates, and also because there is an impression swine fever is due to climatic influence, 2834. The system of reporting disease should remain as at present, 2836. It is very desirable to determine whether the disease reported is swine fever or not, 2837. This can only be done by *post-mortem* examination, 2837. The country should be divided into districts with an officer of the central authority in each district. This officer could examine the portions, 2837, 2870–2, 3108–14. In cases of doubt the parts should be sent to the central authority, 2837. Examination of the intestines, heart, and lungs, is desirable, 2837. The present local inspectors are appointed by the local authorities, but the appointments must be confirmed by the Lord Lieutenant, 2839, 2863. Half their salaries are paid out of the Cattle Diseases Fund, 2839, 2864–5. Would not propose to make the local inspectors more a servant of the Veterinary Department than at present, 2838–9. The maximum of compensation should be increased to 7*l.* or 8*l.*; two-thirds value would be sufficient for diseased animals. 2841–3, 3043–6. All swine exported to England are inspected by qualified veterinary inspectors at the port of embarkation, 2844, 2875–6, 3096. These inspectors are under the Privy Council, 2845–6. Does not think the portal inspection could be made more ample, 3101. Under an Order in Council, 1891, animals of which there is risk of their having been in contact with disease, may be detained, 2847, 3126. Witness succeeded Professor Fergusson, who was a great authority, 2848. Was a travelling veterinary inspector for 10 years, 2849–50, 3067. Explanation of the Cattle Diseases Fund, 2856–62. Reports of outbreaks are in a larger proportion in those Unions where compensation is paid, than in those where there is not the slightest encouragement to report, 2867, 3078–80. If it were known that fair compensation would be given, the statistics would go up, 2868. Thinks it would not be possible to deal with the disease, unless people report, 2869. Having a veterinary inspector of the central authority in each district would obviate necessity of sending diseased portions for examination from all over the country to Dublin, 2872. It would be objectionable if these portions were sent in a tin box, and might be considered likely to spread disease, 2872–4, 2904–5, 2979–87. Statistics of pig population in Ireland, and exports, 2880–6. There has been a decrease in the number of pigs, and also in the outbreaks in 1892; 2882–4. The largest number of outbreaks occurred in Leinster, owing to movement of swine for export, 2886, 2906. Would only declare areas in exceptional cases, 2887, 2894–2903. Restrictions on movement would only be necessary where it is believed disease is not reported, 2887, 2892–3, 2993. The size of the area must be guided by the conditions of the neighbourhood, 2894–7, 2995–6, 3106. In interfering with fairs and markets you often frustrate the law, 2894, 3070. Does not think is would ever be necessary to impose restrictions on an entire county, 2898–2903, 2994. *Post-mortem* appearances, 2954–64. If swine fever diseased pigs are left to themselves, thinks about 35 per cent. would die, 2965–9. Swine fever cases should not be treated medicinally, 2970. Affected animals should not be kept alive, as they are centres of disease, 2971–3. Endocarditis or swine erysipelas, 2925, 2974–6. The percentage of suspected outbreaks to real outbreaks is greater in Unions where compensation is paid than in others, 2978. Not many diseased pigs are detected at the port of embarkation, 2988–91, 3021. Owners would take care not to send a pig if it was sick, 3031–2, 3071–5, 3117. Some pigs have been detained, but not within the last 18 months, 2990–1, 3121–5. Thinks Jeyes' fluid is the best disinfectant, 2997–8. Mode of cleansing and disinfection, 2999–3003, 3131–43. The owner must assist in cleansing his premises, but the disinfecting is paid by the local authority, 3004–10, 3053–8. Wooden sties should be burnt, 3011–12. Thinks 28 days is ample to keep an infected place closed after disinfection, 3013–14. There is not much action taken by the local authorities with regard to swine fever, 3015–16. There have been prosecutions by the local authorities for non-reporting, but local influences militate against their carrying them out, 3017–19. If the onus of prosecution was on a central body, it would probably be more frequently done, 3020. Thinks the majority of the store pigs sent to England go to Liverpool, Holyhead, and Bristol, 3027–9. Pigs are defined as "fat" or "store" by the shipper, 3030–1. Possibly store pigs are killed on arrival in England, 3032, 3146–7. Does not think that living in the house of the owner is an unhealthy condition for a pig, 3033–4. Has no evidence that sanitary authorities object to this on the ground of public health, 3035–6. Has known instances where brine has produced what has been mistaken for swine fever, 3037. Does not think it possible to insist on railway trucks being cleaned within a specified time after use, 3039–42. Dealers object to trucks being lime-washed, as freshly-slaked lime burns the pigs, 3084–5, 3141–2. If trucks were cleansed immediately after use, such burning would not take place, 3086–7, 3143. The moment an infected place is defined, movement of swine from that place is illegal, 3047–9. Cannot remember a case of prosecution for this, 3050. Floors of sties should be impermeable, 3051–2. Is in favour of registering dealers, 3064. Thinks swine fever can be stamped out, as foot-and-mouth disease or pleuro-pneumonia was in Ireland, but there would be some difficulty, 3067–9, 3128–30. There are not inspectors of the Privy Council at the fairs or markets, 3076–7, 3097. Thinks the Unions have too much other work to enable them to deal with swine fever, 3081–4. Thinks compensation should be paid if sties are destroyed, 3089–90. Thinks it is desirable there should be inspection at the markets, and also inspection of swine particularly in districts where disease is known to exist, 3098. Unless the matter is dealt with by a central authority, local inspectors should be paid by the local authorities, 3099–100. There was a decrease in the reported number of outbreaks in 1892, 3102–4. It would be better that the size of an area should be determined by a government inspector rather than the local authority, 3107. Considers that the decrease in the number of pigs in Ireland is attributable to other causes besides swine fever, 3116. Pigs that had been in contact with diseased ones might be sent to a port and be passed after careful inspection, 3119. This implies that inspection at ports is of very little value, 3120. The advantage of using limewash for disinfecting trucks is that it shows they have been cleaned, 3135–9. Reports of the travelling inspectors show that the local authorities are not doing a great deal with regard to swine fever, 3144–5. Few pigs come from England to Ireland to be fed, 3149. Pigs for breeding only are allowed into Ireland from England, 3150–2.

HOWARD, CHARLES (analysis of his evidence):

Is chairman of Executive Committee, Bedfordshire, 154. Has given a great deal of attention to the question of diseases of cattle, 155. Complains that while pigs cannot be brought in from other counties to Bedford by road, they can by rail, 156, 205, 217, 222–3, 284. County Council has no authority over the boroughs of Bedford and Luton, 157–61, 164–5, 202. This dual authority makes it difficult to deal with swine fever, 162, 164, 166–9, 188–9, 224, 284. Swine fever should be dealt with from headquarters, 163, 214, 252–6, 281. Principal cause of disease not being stamped out is facility of movement, 169–70. Compensation is not given now in Bedfordshire, 171, 225, 257. When compensation was paid they found the disease increased, 171, 191. It is likely cases are not reported, 172, 192. Swine fever has increased in Bedfordshire of late, 171, 174, 287. Thinks the diminution in the returns for 1892 is an apparent rather than a real diminution, 173–4. dirt tends to keep up the disease, 175–80. Has never known swine fever in a pedigree herd, 178. Bedford market is kept clean, 181. Two or three prosecutions have taken place lately, 185, 242, 245–51, 263. Thinks if the police were paid for the extra work swine fever would be more actively looked up, 185–8, 301. The county and borough police do not act together, 188–9, 204. Before County Council Act came into operation the county police were given a gratuity for reporting cases of swine fever, 190. In cases of disease owner has no inducement to report, 193–200, 260. Has heard that a good many outbreaks in the country have been traced to Bedfordshire dealers, 201–3, 241–6. Quotes a case, 203–5. There is a strong impression that many veterinary surgeons do not know swine fever when they see it, 205–6, 261–2, 271–3, 310. Appointments as veterinary inspector should be very carefully made, 206–16. Veterinary inspectors should be appointed by the central authority, 214, 264–70, 281–3.

HOWARD, CHARLES—*cont.*

They should undergo an examination, 270. Thinks it would be unnecessary to send parts of suspected swine to London for diagnosis, 265–6. The borough of Bedford has two inspectors, the county has several, 207–16. Pigs can be taken from the county into Bedford, but not *vice versâ*, 165, 218–20. Several dealers in the borough, who advertise pigs for sale, have few if any on their own premises, 221–2. When the county of Bedford paid compensation for diseased and in-contact pigs full value was not given, 226–8. Thinks compensation should be paid, but only three-fourths of the full value should be given, 229–34, 288–95, 298–300. Believed the disease has been concealed, 235–8. Dirty condition of pigsties tends to develop the disease, 239. But does not originate it, 240. There is no registry of the dealers in the borough of Bedford, but their premises are inspected, 243–4. If the duties in regard to swine fever are vested in a central authority certain duties would still have to be performed by the local authorities, 256. Does not know of any instance where swine fever has broken out in a well-kept herd of pigs, 274–5, 302. Police look after infected places and return the number of diseased swine, 276–80. The county in some cases pays for disinfection of sties and burial of pigs, 277–8. Two hundred pigs a week are sent from town of Bedford, 286. Healthy in-contact pigs are sold at a disadvantage, 297. Thinks swine fever is more prevalent with small owners, 303–7. Thinks there has been more disease in the summer months than at other times, 308. Veterinary inspectors are not paid much, 309. There are about 2,000 acres of rural land in the borough of Bedford, 311–13. There is a pig insurance club in Bedfordshire, 314–18. Quotes cases of diseased pigs on the railway, 319–23.

INOCULATION. *Duguid* 327–8, 336–9, 422, 467; *Axe* 3367, 3451–2, 3558, 3575–6.

INSPECTION, PORTAL. *Sanders Spencer* 351–2, 387, 396–7; *Walley* 1090; *Christian* 1563; *Hedley* 2844–7, 2875–6, 2988–91, 3021, 3031–2, 3071–5, 3096, 3101, 3117–26; *Axe* 3508–9, 3570–4, 3609; *Newsom* 3807–11; *Wood* 4521–33, 4642–4, 4679–81, 4690–2; *Stephenson* 5330; *Tennant* 5656–61.

INSPECTORS, VETERINARY. *Duguid* 1, 334, 428–32; *Howard* 205–16, 261–73, 281–3, 309–10; *Sanders Spencer* 506, 520–2, 555, 569–75, 617–21, 644, 725–6, 759–60; *Walley* 769, 844; *Benjafield* 1118, 1163; *Redman* 1270, 1342, 1375–9; *Christian* 1492–3, 1547–51, 1590–3; *Hamersley* 1717–21; *Cunningham* 1775–6, 1781, 1784, 1838–41, 1889–90, 1914, 1923, 1966–8, 1979, 1983–4, 2067, 2074, 2096–8, 2140–2; *Dobbie* 2165–7, 2184–6, 2189–92, 2227, 2259, 2271–6, 2313–20, 2352–3, 2377–81; *Dixon-Brown* 2421–3, 2511–3; *Carroll* 2565, 2578, 2580–5, 2632–6, 2659–40, 2713–4, 2722, 2762, 2776–82, 2801–3; *Hedley* 2806, 2838–9, 2849–50, 2863–5, 2870–2, 3067, 3099–100, 3108–14; *Prentice* 3153–5, 3170–5; *Treadwell* 3261, 3280–6, 3312–14, 3339–40; *Axe* 3386, 3407, 3441–2; *Newsom* 3624–30, 3663–7, 3723–4; *Garratt* 3940, 4142–4; *Sewell Read* 4239, 4242–3, 4250–5, 4267, 4273, 4293–4, 4366–8; *Duckham* 4451–2; *Wood* 4682–7; *Russell* 4703, 4711, 4775, 4790–5, 4801; *Crofts* 4869, 4881–3, 4955–60; *Stephenson* 5255, 5272, 5349–56, 5378; *Tennant* 5416, 5466, 5510, 5576–80, 5630, 5696; *Dunne* 5725–7, 5766, 5801–2, 5845–7, 5876–82.

LAIRS. *Sewell Read* 4271–8, 4350–6; *Wood* 4571–7; *Russell* 4801–3; *Stephenson* 5276, 5318–23; *Tennant* 5412; *Dunne* 5759, 5763–5.

LICENCES. *Howard* 243–4; *Duguid* 463–6; *Sanders Spencer* 605–6; *Walley* 825–31, 1029–32, 1046–8; *Benjafield* 1103, 1129, 1136–40, 1176, 1178; *Redman* 1285, 1321, 1351–61, 1365–74; *Christian* 1556, 1581–2; *Hamersley* 1730, 1743–4; *Cunningham* 1799, 1801–5, 1888, 2027–4, 2081–9; *Dobbie* 2221–3, 2262–5, 2289–94, 2335–6; *Carroll* 2589, 2704–6; *Hedley* 2832, 2877–9, 3064; *Prentice* 3160–2; *Treadwell* 3264–70, 3298–9, 3305–6; *Axe* 3394–401: 3546–9; *Newsom* 3741–5, 3782–6; *Garratt* 3971–7; *Sewell Read* 4347–8; *Wood* 4534, 4565–6, 4579–80, 4645–7; *Russell* 4715, 4746–9, 4839, 4854–8; *Crofts* 4908–10, 4913–7, 5179–86; *Stephenson* 5376–7; *Tennant* 5443, 5634–6, 5656–9; *Dunne* 5729–30, 5832–3, 5852–3.

MARKETS. *Duguid* 41–7, 54, 58, 78–9, 444–5, 448; *Howard* 181, 286; *Sanders Spencer* 503, 508, 536, 597–8, 763; *Walley* 1028; *Benjafield* 1096–9, 1132, 1173; *Redman* 1279–81; *Christian* 1458–61, 1521, 1554, 1566–70, 1601–4; *Hamersley* 1620–4, 1629, 1656, 1724–8, 1729, 1773; *Cunningham* 1832–6, 1975; *Dobbie* 2263–70; *Dixon-Brown* 2466–8, 2480–3; *Carroll* 2608–10, 2619–20, 2662, 2694–5, 2697, 2743–4, 2746–51; *Hedley* 3070, 3076–7, 3097–8; *Prentice* 3167; *Axe* 3393, 3446–50, 3492–6; *Newsom* 3648–9, 3736–7; *Garratt* 3885–6. 3890–9, 3902, 3909–14, 3998–4032, 4051, 4080–96, 4131–5, 4153–5, 4164–8, 4183, 4190–1; *Sewell Read* 4224, 4263–6, 4279, 4281–91; *Wood* 4567; *Russell* 4743–4, 4772–4, 4801–13; *Crofts* 4881–3, 4899–903, 4947–52, 4955–60, 4997–8, 5003–4, 5014–7, 5027, 5099–104, 5158, 5165–75; *Stephenson* 5274, 5308–17, 5327, 5335–6, 5340–8, 5373–4, 5383–4; *Tennant* 5412; *Dunne* 5727, 5738–42, 5770, 5838–40.

MEASLES. *Walley* 845, 853, 923–7.

MOVEMENT, RESTRICTIONS ON.—*Duguid* 5–14, 16, 43–46, 74–6, 114–8, 353, 383–4, 414–8; *Howard* 169–70; *Sanders Spencer*, 538–9; 544, 682; *Walley* 818–20; *Benjafield*, 1100–4, 1114, 1121, 1129–32, 1140–1, 1162–73; *Redman*, 1190–2, 1214–26, 1264, 1285, 1322–3, 1367–74, 1443–5; *Christian* 1458–61, 1483, 1494, 1508; *Hamersley* 1646–56, 1678; *Cunningham* 2102–4; *Dobbie*, 2246–8, 2261; *Dixon-Brown* 2399, 2403–4, 2450–9, 2540; *Carroll* 2567, 2755; *Hedley* 2886–7, 2892–7, 2906, 2993–6, 3070, 3106; *Prentice* 3176–9, 3182–3; *Treadwell* 3275, 3301–2, 3317; *Axe* 3376–7, 3565–9, 3619–23; *Newsom*, 3868–70; *Garratt*, 3887–99, 3900–8, 3956–7, 3960–71, 3986–92, 4038, 4122–3, 4147–8, 4172–4; *Sewell Read* 4224, 4309, 4342–6, 4380–7; *Duckham* 4401–3, 4445, 4453–4, 4480–1; *Wood* 4488–90, 4535–40, 4627–8, 4638–41; *Russell* 4697, 4704, 4777–8, 4796–800, 4825–9, 4848–52; *Crofts* 4884–91, 4905–7; 4928, 5155–7, 5188; *Craigie*, 5239–40; *Stephenson*, 5263–7, 5275, 5324–5, 5332–4, 5374; *Tennant* 5399, 5405, 5408, 5420–1, 5425–7, 5453, 5467–73, 5479–81, 5490–1, 5495–8, 5514, 5528–36, 5551–2, 5570, 5622, 5643–50, 5670, 5674, 5707–9, *Dunne* 5728, 5743–6, 5752, 5808–13, 5835–7, 5851, 5856, 5870, 5894.

NETTLE-RASH. *See* URTICARIA.

NEWSOM, GEORGE (Analysis of his Evidence):

Veterinary Inspector to the local authorities of Rathdrum and Shillelagh, 3624–30. Has seen a good deal of swine fever, 3631, 3719–21, 3835. Symptoms and character of the disease, 3632–4, 3691–3718. Has frequently found a mild or chronic form of the disease, 3634. Way in which swine fever is spread, 3635–8, 3642. Principally owing to traffic through fairs, 3635–8, 3644, 3735. Sows going to boars and castrators are causes of its spreading, 3636–8, 3738–45, 3782–6. In his two unions the policy has been to slaughter only the affected swine, and pay half their value, 3639–41, 3752–4, 3758–9, 3770. To a great extent this has been successful, 3641. One drawback is that the people will not report if they think the pigs will recover, 3641. Believes occasionally a diseased pig is killed, and the ones in-contact disposed of, 3641, 3644. Dirt is not the cause of, but tends to propagate the disease, 3642. Unless the local authorities would build the sties does not think it possible to improve their condition, 3643. Does not think the local authorities can deal with swine fever, 3645, 3650. It should be dealt with by the central authority, 3646, 3650, 3661–3. All pigs in-contact should be slaughtered and compensated for, 3646, 3753–7, 3771–2. A surrounding area should be declared, and movement in and out stopped for some time, 3646, 3650, 3784–5. The size of the area should depend on circumstances, but thinks a large one would only be required in thickly populated districts, 3647–8, 3873–4. All fairs and markets should be stopped in districts where disease is, 3648–9. Has no doubt that with this policy the disease can be stamped out, 3651–3, 3659. Does not think there would be any difficulty if it is dealt with by a central authority, 3654. Thinks if proper compensation were given, the people would report disease, but there might be some few exceptions, 3655–7. They have not had a case in Rathdrum Union for six months, 3660, 3723–7. Thinks perhaps it would be desirable to employ the local inspectors,

NEWSOM, GEORGE—*cont.*

and that when so employed they should be paid by the central authority, as in pleuro-pneumonia, 3663–7. *Post mortem* appearances, 3668–97, 3840–59. In acute cases the disease can be detected by external symptoms, 3732–3, 3836. There are only two characteristic morbid appearances to be relied on, viz., the button-like ulcers and croupous exudation, 3668–80, 3695–7, 3698–3714, 3820–2, 3852. Disease of the lung by itself is not indicative of swine fever, 3681–7, 3850–4. In some chronic cases it is impossible to say if it is swine fever, 3836, 3858–9. Has met with swine fever without any redness on the animal's skin, 3688–95. Paralysis of hind quarters and the peculiar diarrhœa are indicative of swine fever, 3632, 3691–2, 3732–3. Witness generally makes *post-mortem* examination, 3693. Has known the temperature go to 106, the normal being 103; 3715–8, 3820. Witness always endeavours to trace the origin of an outbreak, but does not know that it is part of his duty to do so, 3723–4. Having ascertained the origin, he does not report it to the local authority, 3725–6. Does not think the disease has been brought in to his unions from other unions, 3727–30. Store pigs do the damage, not fat ones, 3730–1. In chronic cases the disease is difficult to detect, 3733. This difficulty would exist among pigs at port of embarkation, 3734. Nearly all the fairs and markets are held either in open fields or the streets, 3736. It is impossible to cleanse and disinfect these places, 3737. Does not think it would do any good to license castrators, 3741–5, 3782–6. Has always disinfected, as far as possible, sties which were infected, 3746. Has no power to destroy them, 3747. They are often constructed merely of wattles, 3748–50. It would be a wise precaution to destroy these sties, 3751. As a rule, the majority of in-contact pigs die, 3760. His county, Wicklow, is a pig-rearing district, 3761–4. If a pig refuses food it is generally killed by the owner, 3765–6. But if it is swine fever it is reported, 3767–9. Thinks the compensation limit of 4*l.* might be increased to 8*l.*, 3773–81, 3815–7. Thinks boar stations should be under supervision, 3787. The condition of the pigs in the cottages built under the Land Act is better than in the case of the ordinary houses, 3789–90. The floor of every pigsty should be of concrete, 3791–2. As a rule in-contact pigs would include all those on the premises, 3793–8. The present system of reporting to the police is satisfactory, 3799–3805. Every means should be taken to accelerate reporting and dealing with the disease, 3805. His district is thinly populated, 3802. Thinks pigs with incipient disease would develop it on board ship, and it would most likely be detected either at the port of embarkation or debarkation, 3807–11. To his knowlege no pigs suffering from the disease are sent to Waterford, 3806. The owners of pigs in his district are mostly labourers and tenants, 3643, 3812–4, 3866. Nearly everybody keeps a pig, and it would be impossible to register them, 3866–7. The Board of Guardians at present pay half the compensation, half is allowed out of the General Expenses Fund, 3818–9. The owners pay for the disinfection of sties, 3825–6. The disease recurs in the same premises. Quotes a case, 3827–34. Has known cases of pigs dying suddenly, but no bowel lesions were found, only the spleen enlarged and congested, 3838–47. Has had no experience of endocarditis or erysipelas, 3860–2. In his district the moment disease is discovered a notice restricting movement is served on the owner, 3868–70.

POST-MORTEM EXAMINATION. *Duguid* 99–100 332–5, 372, 375–80, 398, 433–7, 447, 453; *Howard* 265–6; *Sanders Spencer* 750–5; *Walley* 787, 853, 886–94, 900–8, 939–43, 962–3, 1012–3, 1056–76, 1080; *Benjafield* 1133–4; *Redman* 1236–7, 1253–5, 1342–50, 1430–1, 1433; *Christian* 1548–9, 1614–15; *Hamersley* 1675–7; *Cunningham* 1785, 1899–1912, 1935–7, 2005–7, 2114–27; *Dobbie* 2231–8, 2252, 2328–30, 2358, 2363; *Carroll* 2628; *Hedley* 2954–64; *Axe* 3433–40, 3479–89, 3507, 3520–3, 3527–30, 3577–601; *Newsom* 3668–714, 3820–2, 3840–59; *Russell* 4703; *Crofts* 4898, 5032–7, 5065–86, 5135–7; *Stephenson* 5272, 5280–4; *Tennant* 5509–10; *Dunne* 5766, 5801.

PRENTICE, DAVID (Analysis of his Evidence):

Travelling Veterinary Inspector of the Privy Council in Ireland, 3153–5. Condition in which swine are kept in Ireland, 3156. Thinks there has been an improvement under the recent Land Acts in the manner in which swine are kept, 3157. There is room for much improvement in construction of pigsties, 3159. There is no supervision of the construction of pigsties, except occasionally by the medical officers of health, where the insanitation affects human beings, 3159. Does not think it would be practicable to license owners of pigs in rural districts, 3160–2. More could be done in this respect in towns, 3162. Large herds of pigs are exceptional, swine are generally kept in ones and twos, 3163–5. They are generally kept till four to six months old, then sold as stores, then fatted for export, or killed in bacon curing establishments in Ireland, 3166. They are generally sold in public market, 3167. The practical way to stamp out swine fever is to kill the diseased and in-contact animals, 3168. This should be done by a central authority, 3169. In some instances it might be possible to utilise the inspectors of the local authority, 3170–3. In several Unions there is no veterinary surgeon, 3172. For dealing with the disease the country should be divided into four districts, each under the charge of an inspector of the central authority, 3174. If a case were reported by a local authority's inspector, it should be verified by an officer of the central department, 3175. Swine fever should be dealt with much in the same way as pneumonia was, 3175. As soon as it was found there was swine fever, a notice restricting all movement should be served on the owner; this would be better than declaring an infected place, 3176–8. Such restricting notices were served in cases of pleuro-pneumonia, and were thoroughly effective, 3182–3. Restrictions on the movement of swine should be of a modified character, 3179. Would keep an infected place closed for about six weeks, 3180, 3189–94. Where the sties are of wood, and have earthern floors, they should, after cleansing, be saturated with some disinfecting fluid, 3181, 3192. Thinks the maximum of compensation should be 10*l.*, 3185, 3212–8. This amount would be exceptional, 3215–7. The "Symptoms of Swine Fever," issued by the Department, has been posted up by local authorities, and has been effective in calling people's attention to it, 3186–8. People need more encouragement in the way of compensation, 3188. Has seen much of swine fever, and has made *post-mortems*, 3195–7. Thinks, on the whole, the symptoms given in the circular, "Symptoms of Swine Fever," are fair, 3198, 3219–25. Redness of the skin is common to all diseases of swine, 3199. Has not seen cases of pigs dropping dead without showing previous signs of swine fever, but thinks it practicable, 3200–1. Would say pigs die in four or five days, rather than 24 or 48 hours, as mentioned in the circular, 3202–3. Thinks if pigs lived for four or five weeks they would recover, 3204. Has seen cases of recovery, but the animals were wrecks, 3205–7. Has found the temperature of diseased pigs up to 104 degrees, but not higher, 3208–11. Does not know that a pig affected with swine fever sometimes drops dead while feeding, but it might, 3223. It would imply rather apoplexy or choking, 3224. Nettle rash may be mistaken by people, not conversant with swine fever, for that disease, 3225. Perhaps, as swine are of little value as compared with cattle or horses, the same interest has not been taken in their diseases, 3226. If proper measures are adopted, the disease might be got rid of, 3228–30. If people were properly compensated, witness believes they would be disposed to notify existence of disease, 3227.

PROSECUTIONS. *Duguid* 119–21; *Howard* 185, 242, 245–51, 263; *Sanders Spencer* 516–7, 523–4, 578; *Christian* 1486–9, 1524–7, 1600; *Cunningham* 1873–6, 2042; *Dixon Brown* 2321–23, 2489–92; *Hedley* 3017–20, 3050; *Treadwell* 3320–1; *Garratt* 3931–52, 4138–46; *Sewell Read* 4231–2; *Duckham* 4421–3; *Wood* 4603, 4673–6; *Crofts* 4981–5, 5010, 5113–5, 5124–5, 5159–62; *Dunne* 5726.

PURPLES. *Sanders Spencer* 498.

RECOVERY FROM SWINE FEVER. *Duguid* 139, 347, 408–12; *Sanders Spencer* 566; *Walley* 788–91, 909–10, 938, 991–2, 1014–19, 1049–50; *Carroll* 2546; *Hedley* 2965–70; *Prentice* 3204–7; *Axe* 3511–4; *Newsom* 3641; *Crofts*, 4974–5, 5096–8.

REDMAN, THOMAS EDWARD. (Analysis of his Evidence):

Secretary and one of the managers of Messrs. Harris and Co.'s bacon curing establishment at Calne, 1188-9, 1238. Seventy-five per cent. of pigs they receive come by railway, 1190, 1194-5. There have been no restrictions in their district for a long time, 1190-2. Extent and character of their business, 1190, 1193, 1282, 1397, 1400. They kill about 110,000 pigs a year, 1193. Swine fever is now little known in their district, 1193, 1326-9, 1380. It was prevalent two or three years ago, 1243, 1281, 1331. They receive a considerable number of pigs from Ireland, 1193, 1196, 1282, 1352-6, 1400. The pigs from Waterford are often less than thirty hours on the journey, 1197-8. Complains that pigs are often burnt, owing to the lime used for cleaning the railway trucks not being properly slaked, 1199-1202, 1297-9. They cannot claim compensation for this unless it is a flagrant case, as the pigs are carried at owner's risk, 1200, 1293. Does not know of any more effectual means of disinfecting trucks if the limewashing is properly done, 1203, 1300. A pig coming by road or rail to Calne would probably pass through several local jurisdictions, 1204-9. Does not know of a case of swine fever which has been attributed to pigs being conveyed through the district in carts, 1210. They have given very little attention to swine fever of late, 1213, 1409-10. Thinks it is undesirable that movement should be restricted in one county because swine fever exists in another, 1214-23, 1322, 1367-71. Thinks the abolition of the smaller jurisdictions by the Local Government Act of 1888 was a good thing, 1224. Objects to large areas being declared, 1225-6, 1264. Owing to interference with business, 1223, 1226-7, 1323, 1351. They receive no guarantee that pigs sent to them are free from disease, 1228. Indication of swine fever in the living animal, 1231-4, 1250-2. If they suspect anything is wrong with a pig it is examined, 1229-30, 1235, 1244, 1237-90. If swine fever is suspected they send for the medical officer of health and he examines the intestines, 1236-7, 1253-5, 1342-50, 1430-1, 1433. Has been connected with Messrs. Harris's firm for 26 or 27 years, 1238-9. The majority of the pigs they kill are from seven to nine months old, 1240. Their dead weight would vary from 140lb. to 200lb., 1241-2. His firm have found no cases of swine fever for two or three years, 1243. If a pig on arrival had the disease in a very early stage it might not be detected, 1248-51. Compensation is not paid in Wiltshire, 1215, 1256. It was until a few years ago, 1330. Compensation should be paid, 1257. When compensation is not given a man is likely to conceal disease, 1257, 1260, 1411. There is swine fever at present in the Chippenham district, 1258. Thinks the Wiltshire farmers attach a good deal of importance to swine fever, 1259-60. They are put under great restrictions when they have an outbreak and get no compensation, 1260. Thinks there is a great want of uniformity in regard to restrictions, among the various local authorities, 1261. Believes swine fever has a spontaneous origin, 1265-6. Has often known pigs which have been lying on heated manure develop what is supposed to be swine fever, 1267-70, 1428-9. Thinks it is doubtful if swine fever is well understood by the veterinary profession in his part of the world, 1270. Has known swine fever occur in well-kept cemented sties, and where the pigs had no access to manure heaps, 1270-5, 1293, 1418. There may have been disease in the neighbourhood, 1272. Does not think a dealer would knowingly circulate pigs which had swine fever, 1276-7. There are markets for store pigs at Devizes and Chippenham, 1279-80. Two or three years ago, when swine fever was rife, cases were traced to these markets, 1281. Dunkirk is the only foreign place they have ever had pigs from, 1284. They have not imported any foreign pigs for 20 years, 1283. They cannot be got at the price of home pigs, 1284. They have to get licences with pigs from Hampshire and the Isle of Wight, 1285, 1368. That is the only district from which they are required to get licences, 1285. There have been frequent and unaccountable outbreaks of swine fever at the Chippenham Milk Factory, where the pigs were fed on the refuse of condensed milk, 1291-96, 1418-20. The pigs there are not now fed so heavily on the refuse milk, and there have been fewer outbreaks, 1293-6. Believes there was a genuine falling off of swine fever in their district in 1892, although the supply of pigs fell off considerably in that year, 1301-4. They object to the black hogs which come from Connaught, 1305-7. Does not remember ever having had a case of swine fever in an Irish pig, 1308-11. Wiltshire is a great pig-breeding county, 1312-15. A great many suckers however are brought in from Hampshire and Berkshire for fatting, 1314-16. Few pigs come into Wiltshire from Bedfordshire, 1317-8. Thinks it might be desirable to register boar stations, 1321. They have agents who purchase pigs for them, 1332-7, 1362-4. They buy by dead weight, 1364, 1383-8. This does apply to Irish pigs, 1389-92. The firm does not breed or feed any pigs, 1338-9. All their pigs are killed within a few hours of arrival, 1193, 1341. They do not call in a veterinary surgeon, 1342. They do not give much attention to suspected pigs when alive, 1347. They deal with them, in regard to the public health, when dead, 1350. Having to obtain licences entails a great amount of inconvenience, 1351-61, 1365-74. Would have no objection to veterinary inspector visiting their premises, 1375-9. Preparation of entrails for human food, 1393-96. They buy pigs of all breeds, 1997-1404. They have tried to introduce the "Tamworth" cross, 1405-7. But the people think they are not good doers, 1405. Believes the farmers are unaware of the regulations requiring notice of disease, 1409-10. Does not think that swine fever attacks certain classes of pigs more than others, 1413-14. But where the pigs are not properly kept they are likely to contract the disease, 1418, 1421-2. Thinks it is desirable that local authorities should have greater powers than they now have, with regard to enforcing cleanliness in keeping of pigs, 1423-6. there has been great difficulty in this matter in Wiltshire, 1425. They never cure an animal, unless it is undoubtedly sound, 1432-3. Thinks maximum compensation now allowed should be increased. 1434-42. Does not think foot-and-mouth restrictions or railway rates have have had any effect on the pig trade, 1443-5. Thinks pigs are better kept now than formerly owing to sanitary restrictions and influence, 1446, 1451-2. Where there are cemented floors, a pig ought to have a board to lie upon, 1447. There is a common idea that when pigs lie on brick floors they are more lible to swine fever, 1448-9. Does not think it would be possible for local authorities to insist on pigsties being paved with cement, 1450. There is a great deal of pig insurance in Wiltshire, 1451-2.

ROTHLAUF. *Sanders Spencer* 505.

ROUGET. *Duguid* 341-4, 454; *Walley* 843, 962, 1077-81, 1083; *Axe* 3542.

RUSSELL, CAPTAIN THEODOSIUS STUART (Analysis of his Evidence):

Chief Constable of the West Riding of York, 4693. Has given attention to measures connected with swine fever, 4694. Measures adopted in the West Riding, viz., isolation of affected animals, disinfection, and tracing the origin of outbreaks, 4696-7, 4849-53, 4862. Compulsory slaughter and compensation has, within the last few years, been abolished, 4696, 4775. His opinion is that their present policy would not stamp out the disease, 4698, 4708-10. Although there has been a diminution, it is not a real one, and merely means that fewer cases have been reported, 4698, 4702, 4788, 4854, 4863-4. When compensation was given, every pig that had anything the matter with it was reported, and the owner got advice for nothing, 4698, 4776. Thinks now a great number of cases are not reported, 4698, 4702, 4737-9. Number of outbreaks this year, 31, 4699, 4701. The disease cannot be detected without a *post-mortem*, 4703. Thinks mistakes are often made, 4703, 4775. Does not think his county is closed against pigs from other counties, 4704, 4777, 4796-4800, 4829, 4848. Their efforts to trace the origin of outbreaks have been fairly successful, but not altogether satisfactory, 4706, 4740, 4751. It is easier for the Government to do than for the police,

RUSSELL, CAPTAIN THEODOSIUS STEWART—*cont.*

4706–7, 4740. Thinks it is certainly possible to stamp out the disease in the same way as rabies or pleuro-pneumonia, 4708, 4834–8. Attributes present difficulty to the multiplicity of authorities and want of uniformity, 4709, 4736, 4838. None of his superintendents attribute the outbreaks to pigs from Ireland, 4710, 4859–61. The Board of Agriculture should take the whole responsibity of the matter in hand; he would let the police report and the veterinary surgeon declare the case in the first instance, 4711–12, 4722. The police could give every assistance with regard to disinfection, watching premises, &c., 4711–13, 4722–30, 4868. The Board should deal with sale of carcases, valuation, &c., 4711–3, 4722. The filthy state of the pigsties in the West Riding has much to do with keeping up the disease, though dirt does not originate it, 4714, 4758, 4767–71, 4817. It would be desirable to have a more rigid inspection of pigsties and give sanitary authorities power to intervene if the condition of the sties are favourable to the maintenance of the disease in the animal, 4714–9. The appointment of a county medical officer of health should be compulsory, so as to give the county authority power to intervene where the lesser authority was not doing its duty, 4720. They have a medical officer of health in the West Riding, 4721. There are 16 boroughs in the West Riding, they do not, to a large extent, work with the county authority, 4731–5. The police receive travelling and maintenance allowances, 4781–4. Extra pay to police for work connected with swine fever would not be permissible, 4741–2, 4865–8. Has heard that some of the markets in the West Riding are not in the satisfactory state they should be, 4743. Would say that much of the swine fever is due to the unsanitary condition of the markets, 4744. Dealers' carts transmit the disease, 4745. Pig keepers should be licensed, if practicable, 4715, 4746–9, 4839, 4854–7. Dealers should be licensed, 4858. There are large colliery districts in the West Riding, and the miners keep pigs, 4750, 4854. The colliers buy pigs in markets not knowing where they come from, and it is impossible to trace them, 4751. It would be desirable, if possible, to destroy many of their sties after an outbreak, 4752–5, 4780, 4840. This has not been done, so far as witness is aware, 4819–21. Does not know of any large herds in the West Riding, 4756–7. In many cases the disease is brought in from outside the county, 4758–63, 4814–6. Thinks the regulations for disinfecting railway trucks are fairly carried out, 4764. They often have a recurrence of disease in the same sty, 4765. Thinks the premises are generally closed for more than 28 days, 4766. The police exercise supervision over the condition of the markets, 4772–4. When slaughter was compulsory, the returns of compensation increased, 4775, 4785–9. Believes other counties were scheduled by the West Riding, for a time, when disease was prevalent, 4778, 4825–8. Carbolic acid is chiefly used as a disinfectant, but it is impossible, unless you dig up some of the sties, to disinfect them, 4780. They have a chief veterinary inspector, who is called in in cases of difficulty, 4790–5. Markets and lairs are inspected by a veterinary inspector, 4801–3. There are a great many marts in his county, but chiefly in the boroughs, 4804–6. Believes the markets are washed and disinfected with lime, 4808–13. It is more difficult to disinfect for swine fever than in other diseases, 4818. All orders are sent direct from the clerk of the peace to his superintendents, 4822–4, 4830–3. Local authorities could possibly stamp the disease out, but it is not probable they would, 4834–8. If pigsties are destroyed, the owners should be compensated, but thinks this might be open to abuse, 4842–7. There are fewer pigs kept now in the West Riding, 4854. Thinks they get the disease from the boroughs, rather than *vice versâ*, 4862.

SEWELL READ, CLARE (Analysis of his Evidence):

Represents the Central Chamber of Agriculture, Norfolk Chamber, the Farmer's Club, and Norfolk Cattle Diseases Committee, 4221–2. Has had a long experience of cattle diseases, 4223. Policy adopted and regulations issued in Norfolk from 1879 to 1892, 4224. They have closed their markets and sales at times, 4224. They have suffered continually from Suffolk, and also from the borough of Bedford, sending diseased pigs, 4224–5, 4298. They have had no

SEWELL READ, CLARE—*cont.*

trouble with the boroughs in Norfolk, except on two occasions with Norwich, 4224–8. Three years ago, at an East Anglian conference, they tried to get the eastern counties and boroughs to adopt uniform regulations, 4229, 4299. It fell through, the only resolution carried unanimously was that dealers should be licensed, 4229–30. Norfolk proposed that all affected swine should be slaughtered, but it was rejected, 4229–30. Pig dealers are the most troublesome class they have to deal with, 4231, 4365. They have prosecuted a few and convicted them, 4231–2, Thinks the question of the position, size, and sanitation of pigsties is a question that is generally stringently dealt with in Norfolk by the guardians and sanitary authorities, 4233–5, 4348. Does not think it necessary to licence piggeries, 4347–8. Filthy conditions tend to keep up the disease, but do not create it, 4236. The Board of Agriculture should deal with the disease, 4237, 4255, 4328. Would follow the lines of the Pleuro-pneumonia Act, 4238, 4241. The action with regard to pleuro-pneumonia has been marvellously successful, 4239, 4246–9, 4375–9. No Irish or foreign pigs are imported into Norfolk, 4240, 4329. Apprehends the Board would employ the local inspectors, and when they did so, would pay them, 4242–3, 4250–5. In every case they would only be wanted for a limited time, 4254. Generally speaking, the present limit of compensation is fair, 4244–5. Swine fever is more akin to foot-and-mouth disease, and would require different treatment than that adopted with pleuro-pneumonia, 4257. The principle of slaughter and compensation, restrictions on movement, and improved sanitary precautions should be adopted, 4256, 4309. With these, witness expects the disease would be exterminated, 4310, 4327. The central authority, however, should deal with it as they thought best, 4258–62. The central authority should pay the costs, 4262. If markets, &c., are well regulated, they ought not to be sources of disease, 4263–4. Markets in Norfolk, 4265. The large markets are paved and disinfected, some of the others are not, 4266. Some of the inspectors employed by the county act also for the boroughs, 4267, 4273. Most of the pigs come by road to Norwich. There are pig lairs in Norwich, 4271–8. Lairs should be licensed and under control of the market authorities, 4350–6. Is sure that they are inspected, 4273. In Norfolk they had to contend with sales, which took place close to the railway station, when the markets were closed, 4279. Thinks it is desirable the central authority should have power to prohibit buying and selling in places other than markets and sales, 4281–91. Thinks there has been concealment of disease among certain small dealers, 4292. In Norfolk the police and inspectors try and trace the origin of an outbreak, 4293–4. Thinks swine fever has so frightened many farmers that they have given up breeding pigs, 4295. The pig population has decreased, 4296. Believes small pigs are sent from Bedford to Norfolk by advertising people, 4297–8. The great cause of the continued existence of swine fever has been the want of uniformity of action, 4229, 4300. Disinfection at farms where there has been disease is always insisted upon, 4301–4. They have regulations for disinfecting dealers' carts, 4224, 4304, 4322–3. They have never destroyed pigsties, but thinks in many cases it would have been cheaper to do so, 4305–6. They have not found that manure, if disinfected, conveys infection, 4306. Thinks the central authority will find swine fever much more difficult to get rid of than pleuro-pneumonia, 4307. Has, however, confidence that it can be done if they have stamina enough, 4308. Believes swine fever is contagious, and cannot originate spontaneously, 4310. Suffolk do not slaughter, 4311. And are so full of disease they never hear of it, 4312. Norfolk has always slaughtered diseased, and at times in-contact, pigs, 4313–15, 4373–4. Attributes their comparative freedom from disease now to slaughter and their regulations, 4316. They isolate the contact pigs very strictly, sometimes for three months, 4317–8, 4332–3. Nine out of ten would die; but the owners invariably killed and sold them, 4334–41. They find the best thing is to clear a place out and not let any pigs in for six months, 4318–9. Their recent outbreaks have come from outside the county, 4320–1. Down to 1890 they had a good deal of disease in the county, 4224, 4320–1. A good many fat pigs are sent to Yorkshire and some to Wiltshire for curing, but they have now a factory in Norfolk for curing, 4324. It is impossible

SEWELL READ, CLARE—*cont.*

to get uniformity of action of all the local authorities, 4325–6. They stopped slaughter of in-contact animals because they found it made no difference in the progress of the disease, 4330–1, 4369–72. Pigs from Suffolk are not absolutely prohibited, but they have to have a declaration with them, 4342. Large scheduled areas are a mistake, 4343–4, 4380. They entail enormous loss and inconvenience, 4382–7. Would place no restrictions on a non-infected county, 4345–6. Thinks the size of the area must depend upon local circumstances, 4388. The number of pigs is generally greatest in Norfolk after the harvest, 4357. General history of pigs in Norfolk, 4358. There are some large herds, 4359–61. The man who breeds his pigs is safer than the one who buys, 4362–4. The outbreaks do not generally recur on the same farm, 4365. Thinks eminent professional men may be mistaken in their theories, 4239, 4366–8. The central authority must take up a decided course and stick to it if they wish to have the approval and co-operation of the farmers of England, 4388–96. Quotes the case of foot-and-mouth disease at Hastings as a change in the policy of the Board of Agriculture, 4388–96.

SEWERAGE FEVER. *Duguid* 441–2.

SPENCER, SANDERS (Analysis of his Evidence):

Lives in Huntingdonshire, 482. Is an extensive breeder of pure-bred pigs, 483, 485, 703. Has given a great deal of attention to diseases of swine, 484. For thirty years has had a large foreign trade, 486, 708. Foreign importations now have no influence on the disease, as few live pigs come from abroad, 487, 636, 668. Undoubtedly swine fever is an imported disease, 488, 667–9. Swine fever or hog cholera has been imported from America, Germany, and France, 489. In the States there is a considerable amount of hog cholera now, 490, Scientific persons are not agreed as to whether hog cholera is the same as swine fever, 490–2. Swine fever has been common on the Continent for years, 493, 501, 510, 711. The European countries do not protect themselves against one another, 494–6. It is difficult for them to take precautions, 495. Swine fever was very common in Austro-Hungary 15 years ago, 496. It was thought little of then, 496. Is not sure that the development of railways has had an effect on the increase of swine fever, 497–8. Thinks more is heard about swine fever now than formerly, 498. In Servia there are enormous quantities of pigs, which get their living in the woods, 500, 673–5. The more pigs are moved about, the greater the risk of disease, 502. Denmark prohibits swine coming from England, 503, 672. Quotes a case of swine fever which occurred in Amsterdam show yard, 503. Symptoms of swine fever, 505, 642. Symptoms of rothlauf. Hog cholera, swine fever, and erysipelas are very much the same, 505. Quotes case of a sow dying of heart disease, 505, 622, 738. Has never had swine fever amongst his pigs, 507, 510. Veterinary surgeons are now not so careless in diagnosing swine fever as formerly, 506, 521. Attributes his immunity to fact that he never buys at a market. Only buys one or two pigs a year, and these are from stock he knows to be sound, 508, 597–8. When he buys a pig he keeps it apart from the rest for three or four weeks, 508. Thinks dirt has nothing to do with causing outbreaks, 508. But may be a means of its spreading, 676–8. Disease is caused by movement of in-contact pigs, 509, 522, 739–40. Thinks there is no difference between pedigree and other pigs in regard to liability of infection, 511, 627–8. Except where pedigree pigs have been injudiciously mated, and as a consequence have weak constitutions, 511–12, 627–9. Ten or twelve years ago Huntingdonshire was one of the sinks of England as regards swine fever, 513, 517, 523. Witness complained at the time of the neglect of the county authorities, 514. He recommended that the next outbreak should be traced, and the dealer who was responsible should be prosecuted, 516, 523, 578. This was done. The man was not convicted, but his legal expenses came to about 15*l.*, 516–7, 524. Since that time there have been few cases of swine fever in the county, 517, 523. Huntingdonshire pays no compensation, 518–9. When an outbreak occurs, the place is declared infected, and the animals remain diseased till they die, or the owner does what he likes with them, 518. Thinks a good many veterinary inspectors are not thoroughly acquainted with swine fever, or do not take sufficient care in examination, 521, 555. Thinks failure of the Compulsory Slaughter Order was partly due to want of knowledge on part of veterinary surgeons, 520–2. Thinks if care was taken it would be possible to trace the origin of nearly every outbreak, 522, 761–3. Some few years ago the borough of St. Ives would not act with the county authorities, so the latter closed the county against the borough, 525–6. They work together now, 525. The multiplicity of different authorities is a strong argument in favour of having a central authority, 527–34, 545–54. As these various authorities have different interests at stake, 535. Owners of local markets see that it is to their disadvantage that any disease should go from their markets, 536. Thinks the decrease in returns of the disease for 1892 is due to check upon movement owing to the railway rates, 538–9, 682. Also to the fact that people will not give notice of disease when compensation is not paid, 539, 556, 687. And to the steps taken in 1891 to call attention of the local authorities of their neglect in carrying out restrictions, 684, 694. The trade in small pigs sent in crates by rail was for three weeks stopped by the railway rates, 539–43. This trade was a great cause of spreading swine fever, 543, 723–4. Pigs used to come from Bedfordshire into Huntingdonshire, and were then sent into other counties, 544–54. This was stopped, and there was no case of swine fever in Huntingdonshire for a year, 544. Of late years there has scarcely been an outbreak in his division which has not been traced, 553. Swine fever should be dealt with from headquarters, 554–5, 578, 634, 727, 749. If it were known that each outbreak was to be traced to its origin it would influence the number of outbreaks in three months, 556, 594, 535, 658–9. Had the Central Chamber of Agriculture taken up the question two years ago and advocated the Board of Agriculture dealing with swine fever it would have been got rid of by now, 556, 594. Swine fever should be dealt with by the Board of Agriculture in the same way as other diseases, 557, 634, 727, 740. Slaughter should be compulsory, 558–60. Compensation should be given, 558–60. Thinks there is no necessity for declaring large areas, 558, 561, 607–13, 645. Swine fever conveyed by rats, 561, 719. Compensation for in-contact pigs should be their full market value; one-third of their value should be given for diseased animals, 562–8, 580–5. If a limit is necessary it should be 7*l.*, 586, 756–8. The maximum of 4*l.* now given for in-contact pigs is totally inadequate, 562, 579, 582. The average value of the pigs in the country at the present time would be about 3*l.*, 565. Thinks that 95 per cent. of pigs attacked by swine fever die, 566. The 2 or 3 per cent. that recover are valueless, 566. Thinks it is desirable that information of disease should be given to the veterinary inspector and not to the police, 569–75, 759–60. Many people have a disinclination to report to the police, 570–72, 652–6. The average number of pigs on premises where outbreaks occurred in 1891 was only six. In 1892 four and a-half, 566, 577, 591, 593. In England pigs are not kept, as a rule, in large herds, 576–7, 591. Pigs are nearly double the value they were two years since, 580. Quotes a case where an outbreak occurred 400 yards from his premises, 561, 588–90, 608–21, 679–81, 716–22. Outbreaks do not occur in well-managed herds, 585, 592, 596, 671. Swine fever can be conveyed by the feet of human beings, 600–1. Dealers' carts and yards are a frequent source of infection, 602–3, 763. Quotes a case, 603–4. Attaches no importance to licensing, 605–6. In the majority of cases of any disease in a pig the skin becomes discoloured, 623–5. A red skin alone is not indicative of swine fever, 626. Pigs are liable to tuberculosis, 630–1. Pigs if slightly affected are likely to die quickly if moved by rail, 516, 632–3. Thinks if the Board of Agriculture took swine fever in hand it could be stamped out in nine months, 636. It would be more easily and quickly treated than pleuro-pneumonia, 558, 637. Swine fever is bound to show itself in a few days, 637–41, 693. In 95 per cent. of the cases a veterinary surgeon would have no diffi-

SPENCER, SANDERS—*cont.*

culty in deciding if they were swine fever or not, 644, 725-6. The best way of disinfecting a place, if of wood, is either to burn the woodwork or use boiling water, tar, or a mixture of carbolic and whitewash, 647-9. Has about 370 pigs on his premises, 650, 695-8. Thinks a good many pigs have been declared to have swine fever when they had not, 660-1. Does not think young pigs are more liable to infection than older ones, 662. Does not allow the public to send sows to his boars, 663. Never has his pigs castrated, 664-5, 699-702. It is not possible for Indian corn to produce swine fever, 670. Does not think there would be any advantage in the inspection of boar stations, 688-92. Knows of cases where disease has been conveyed by a boar, 712-5. Some counties do their duty in regard to swine fever, others do not, 727,734. With the exception of slaughter and payment of compensation the functions of the local authorities would be the same as at present if the Board of Agriculture dealt with swine fever, 731-7. Would not interfere with movement of healthy pigs by road or rail, 740-6. Every outbreak should be traced to its origin, 741-747. The disease of a pig should be identified, 750-1. Owners should have the opportunity of sending intestines of pigs said to have swine fever to the Royal College, 752-5. Thinks there would be no danger in transit of the intestines, 753. Does not think it would be necessary to send in every case to the Royal College, 754. 99 cases out of every 100 originate either from dealers' yards or market auctions, 763.

STEPHENSON, CLEMENT (Analysis of his Evidence):

Chief veterinary inspector for Northumberland, 5255, 5356. The county and Newcastle-on-Tyne have worked in unison, 5256. Tynemouth and Berwick-on-Tweed have separate jurisdictions, 5257-60. The policy has been to slaughter diseased and in-contact animals and pay compensation, 5261. There are always certain places, from which movement is prevented by order of the Executive Committee; the list is altered according to the "Gazette," 5263, 5324, 5374. They could not work unless the city acted in unison with them, 5264, 5307. List of places now scheduled, 5265-7. All boroughs are included in their respective counties, 5325. Number of outbreaks, animals killed, and compensation paid since 1882, 5268. Witness has taken great pains to trace the origin of the outbreaks, 5270. Instances various outbreaks and their causes, 5270-2. They have had more supposed outbreaks than real ones; since 1882 there have been 68 supposed outbreaks, 5272. Instances variations in symptoms and the *post-mortem* lesions in various outbreaks of swine fever, 5272. Notes of the cause of illness in various suspected outbreaks, 5272. *Post-mortem* appearances, 5280-4. A higher scale of compensation than 4*l.* should be allowed for in-contact pigs; 8*l.* would be ample, the present amount of 2*l.* for diseased pigs is sufficient, 5273, 5299-5304. They found they got several diseased pigs from Scotland, 5270, 5272, 5274, 5337. But they have never had a case from Ireland, 5338, 5385. Way in which the market in Newcastle-on-Tyne is disinfected, 5274, 5340-8. In an outbreak they burn all they possibly can of the sty and manure, 5274. This is done at the owner's expense, 5357. Has great faith in preventing pigs from diseased places coming into the county, 5275. All markets and lairs should be cemented and thoroughly cleansed and disinfected after they have been used, 5276, 5321. Attaches great importance to the provisions of their "Cessation of disease Order"; no place can be freed until the form has been signed by either two members of the Sub-Committee or the Chairman of the Executive Committee, and countersigned by witness, 5276-7. Diversity of practice and multiplicity of authorities is the obstacle to success, 5278. Local authorities have power to get rid of the disease, but it is impossible to get uniformity, 5279. Is in favour of the transfer of jurisdiction to the Board of Agriculture or some central authority, 5279. Lesions occur in the lungs of swine-fever affected animals, which are peculiar to the disease, 5280-3. In *post-mortem* symptoms, enlargement of the mesenteric glands is more uniformly present than any other

STEPHENSON, CLEMENT—*cont.*

symptom, 5283. In cases where the witness cannot decide the nature of the disease, he places the animals in quarantine for a day or so, 5284. At one time witness had authority to kill a suspected pig and make a *post-mortem*, this is now not allowed by the County Council auditor, 5285-8. They used to compensate if a man gave notice, although his pig may have died the next day, 5289-91. Has never known disease spread by manure from slaughter-houses, and does not think it necessary to insist on all such manure being destroyed, 5292-8. The action taken by many local authorities beyond Newcastle, is not strict enough and not uniform, 5305-6. There is a large weekly market in Newcastle, 5308, 5383-4. Number of animals sold last week, 5314-7. Scotland and Ireland supply most of the pigs, which are fat, 5327, 5335-6, 5373-4, 5383-4. There are special regulations for its control, 5309. The authority has special powers under the Improvement Acts to exclude any old, emaciated or tubercular animal, 5310-13. The balance of pigs not sold in the market are sold in the lairs, 5318-9. The public lairs are very good, there are private ones which are not as they ought to be, 5320. They have full power to look after the lairs, and licensing them would not give any advantage, 5322. When disease has appeared in a lairage the owners of the animals have acted loyally, and slaughtered hundreds within a day or two, 5323. Does not think there is much fraudulent concealment in his district, 5326. The pigs from Scotland come by sea, 5338-9. Has no reason to think the condition of the boats is unsatisfactory, 5330. Is sure a central authority can stamp out swine fever, 5331. Recommends compulsory slaughter, compensation, improved sanitary precautions, and, most important of all, restriction on movement, 5332-3. Slaughter alone would not stamp out the disease, 5334. Some years ago they found pigs from Denmark with swine fever, 5339. Witness always takes charge of a case if there is any doubt, or if slaughter takes place, 5349-56. The expense of all disinfection of premises is borne by the local authority, 5358-63. Compensation paid since 1882, 5268, 5364-6. The expense of working the Act is very small, 5369-22. Whenever an outbreak occurs, it is surprising how the people in the neighbourhood commence to slaughter on their own account, 5366-8. Does not think it necessary to license dealers, 5376. Does not see how licensing of premises could be carried out, 5377 Witness advises as to boundary of infected place, the boundaries vary, 5378. Quotes a case in which a large infected place was declared, 5380-2.

STRONGYLES. *Walley* 927; *Stephenson* 5272.

SWINE FEVER, CHARACTERISTICS OF. *Duguid* 69, 132-8, 140-1, 151-3; *Howard* 308; *Duguid* 324, 329-35, 340-5, 422, 424, 433-4, 447, 451-8, 467, 470; *Sanders Spencer* 488-93, 505, 508, 522, 561, 600-1, 623-6, 637-44, 693, 719, 725-6, 739-40, 754; *Walley* 787-8, 843, 853, 866-933, 886-94, 900-8, 981, 991-2, 941, 944, 962-3, 1010-3, 1027, 1056-81; *Benjafield* 1105-6, 1122, 1134, 1175-6, 1181, 1185; *Redman*, 1231-4, 1250-2, 1265-6, 1291-6, 1418-20; *Christian* 1464-8, 1540-2, 1579-80, 1597-8, 1610-11; *Hamersley* 1655, 1681-97, 1748; *Cunningham* 1779-85, 1842-3, 1899-1910, 1922, 1935-7, 2005-12, 2035-6, 2114-27; *Dobbie*, 2338-44, 2387-9; *Carroll*, 2723-6, 2763; *Hedley* 2810-8, 2837, 2909, 2925-64, 2973; *Prentice* 3195-207, 3208-11, 3219-25; *Treadwell* 3310-11, 3341-8; *Axe* 3362-576; *Newsom* 3631-8, 3642-4, 3651-3, 3668-718, 3732-3, 3782-6, 3820-2, 3836, 3840-59; *Sewell Read* 4310; *Crofts* 4964-77, 5061-86, 5120; *Stephenson* 5270-2, 5280-4; *Tennant* 5425, 5560-3.

TENNANT, MAJOR JOHN TRENCHARD. (Analysis of his Evidence):

Chief Travelling Inspector, Board of Agriculture, 5386-7. Was appointed for the purpose of dealing only with matters connected with transit of animals, but by degrees has been employed in matters connected with stamping out disease, 5388. Comparison of the number of animals affected, with the amount paid for compensation. 5389-96, 5400. The disease has increased when the amount of compensation has increased, and a decrease in compensation has been

TENNANT, MAJOR JOHN TRENCHARD—*cont.*

followed by a decrease in the disease, 5389–93. The decrease in disease is probably owing to owners not reporting when they found they were not likely to be compensated, 5393–4. The decrease in compensation was probably due to local authorities finding that they gained nothing by paying, 5398. In 1885 the travelling inspectors were engaged in observing the way in which the orders in force were observed; on the whole their reports were favourable, 5399. Owing to foot-and-mouth disease restrictions having been previously in force, the Swine Fever Movement Order in 1885 was fairly enforced, the local authorities being in a certain degree prepared for it, 5399. In 1886 29,000*l.*, the largest sum, was paid for compensation; a considerable part of this was due to the slaughter of diseased and in-contact animals having been compulsory for two months, 5392, 5400–3. The compulsory slaughter was carried out in a very perfunctory way, 5402, 5563, 5680–1. The disinfection of places was very imperfectly carried out, 5402. Since March 1886, slaughter has been permissive, 5403–4. No combined attempt has been made to deal with the disease, and the variety of policy has been one of the difficulties, 5404–5, 5423–4, 5601. Where the trade has necessitated importation into a district disease has invariably been re-introduced 5405, 5622. Instances counties, 5408, 5600, 5621, 5711. Does not consider the failure to stamp it out discouraging, as not so much as half of the benefit from the Order of 1885 was obtained as might have been, 5406–7, 5564–4, 5681. Centres of infection vary from time to time; Bedfordshire has had a bad reputation for years, 5409–10, 5716. Instances counties which have done well and been successful, 5411, 5600, 5623–4, 5711–4. There has been a considerable improvement in the condition of markets, sale yards, and lairs of late years, 5412. But in all these places the improvement has been less in the places used for pigs, 5412. Local authorities frequently have their attention called to these matters by the Board, but, as a rule, pay little attention to the representations, 5412. The small boroughs are the worst in this respect 5412–13. In many markets, &c., now there are pig-pens unpaved and not drained, 5412. Regulations for the cleansing of dealers' carts and yards are very imperfectly enforced, 5414. The Borough of Doncaster is the best in this respect, 5414. The regulation is a difficult one to enforce, 5414. People are exceedingly unwilling to have the expense and trouble of precautionary measures, 5414–5. In Scotland there is considerably greater difficulty in getting assistance from the police in these matters than there is in England, 5416, 5630. In Scotland the enforcement of regulations is left in the hands of veterinary inspectors, 5416, 5630. In England the chief constable of a county or borough is usually an inspector under the Contagious Diseases (Animals) Acts, 5416, 5631–2. The more the police are appointed inspectors the better, 5631. Swine fever does not exist to any great extent in Scotland, 5418. The Burgh Police Act comes in force this year, making it lawful for a local authority to appoint a chief constable to any other office, and no doubt many will be made inspectors, 5416–8. Roughly speaking, half-a-million pigs a year are imported from Ireland, 5419, 5665. Although most of them are fat, they are not necessarily slaughtered at the port of landing, 5419. Lancashire complained that in 1891, out of 500 outbreaks, 100 were traced to Irish pigs, 5419, 5591–8, 5662. Does not think the Irish trade is more dangerous than movement from one county to another in Great Britain, 5420–1, 5674. Estimate of the loss during years 1879–92. It must have exceeded two millions, 5422. The dealing with swine fever should be transferred to a central authority, 5424, 5440. It would be impossible to get local authorities ever to act together, 5602. It cannot be dealt with as pleuro-pneumonia was, 5425. Draws the distinction between the two diseases, 5425, 5560–2. Swine fever has so many sources by which it can be spread, 5425 While in "pleuro," slaughter was the most important weapon, this is not so with swine fever, where isolation and disinfection are the most important, 5425, 5495–8, 5570. The method adopted in foot-and-mouth disease seems applicable to swine fever, 5427, 5441. Isolation is the important point, and slaughter should be adopted only where isolation is impracticable or unsuitable, 5427. If compulsory slaughter were general the cost would be very large, 5427,

TENNANT, MAJOR JOHN TRENCHARD—*cont.*

5493. Estimates expenditure of such a scheme at 400,000*l.* the first year, 5428–30, 5454–5, 5500, 5546. This ought to extinguish the disease, or very near it, in a year, 5430, 5454, 5542, 5571. Witness suggests two alternative schemes to the above one, 5431. The second scheme would be to have simply restriction on movement, disinfection, reconstruction of the worst sties and no slaughter, 5432–8, 5455–8, 5501. This would be a slow method and very irksome to the trade, 5432–8, 5627–9. There would not be much probability of this scheme being carried into effect, 5459–62. Estimates cost of this scheme at 150,000*l.*, 5437, 5459–98, 5501, 5543. The loss sustained by the trade if this method were adopted might even exceed 400,000*l.*, 5434–8, 5462. If simply regulations for this scheme were made by the central authority, without steps being taken to carry them out, it would certainly fail, 5437. The third, and perhaps the best plan, would be a combination of the other two plans, viz., isolation and discretionary power of slaughter vested in the central authority, 5439, 5463, 5467, 5626. Estimates cost of this scheme at 200,000*l.*; gives details, 5502–3, 5543, 5553–9, 5605–18. In foot-and-mouth they had to deal with an animal population of 30,000,000; with swine fever it would be, say, 3,000,000, 5441. If owners of pigs could be registered and additional powers given to local authorities as to cleansing and construction of sties, it would be of benefit in this matter, 5443. As regards, however, the registration of dairies, it is a dead letter, and witness is afraid this would happen with registration of pig owners, 5443, 5634–6. Thinks if county councils were given supervision over urban and sanitary authorities it would lead to friction, 5444–9. It would be better to put the powers as to cleansing and sanitary condition, &c., direct into the hands of the local authorities, 5450–3. In the above schemes it would be of paramount importance that the local authorities should assist the central authority in all matters of isolation, &c., 5453, 5567, 5603–4, 5641. The Board would have to get powers for slaughter, disinfection, entry, &c., and giving them an entirely free hand, 5463–5. Would not interfere with the appointment or powers of inspectors to the local authorities, 5466. Suggests dealing with the disease first in Scotland and perhaps Wales, 5467, 5675. All foreign importations should be stopped, whether the pigs are for slaughter or not, 5467. There should either be total prohibition from Ireland, or the disease should be stamped out there before it is dealt with in England, 5467–75, 5506, 5514, 5594, 5668–77, 5685–95. As soon as Ireland was free, free importation could be allowed, 5514. Thinks swine fever might be practically stamped out in Ireland in six months, 5476–8. Dealing with the disease thus in detail would be much cheaper than the general slaughter scheme, 5479. While stamping out was going on in Ireland, dangerous centres in England would be shut up, 5479–81. Additions to the present staff would be necessary, 5482–5, 5544, 5637–40. The staff should be appointed outside the Board of Agriculture, 5485, 5515–8, 5521, 5589–90, 5696–5706. The accounts would be vastly numerous and complicated, 5486–9. Restrictions, in the first instance, should be applied to large areas, 5490–1, 5528–36. Small areas create the maximum of inconvenience with the minimum of advantage, 5491. If slaughter was made compulsory instead of at the discretion of the central authority, it would make the stamping out very expensive and prolonged, 5493–4, 5546, 5567, 5599. The assurance of support from farmers and local authorities must be unconditional, 5494. The cost of the scheme suggested by him does not apply to Ireland, 5504–6, 5682–3. Whenever Ireland has adopted action similar to England as regards pleuro and foot-and-mouth disease it has been successful, 5508. Attaches great importance to intestines being sent to London for diagnosis, 5509–10, 5576–80, 5696. This does not apply to Ireland, 5710. Valuers called in should not live in the immediate neighbourhood, 5511, 5556–9. The maximum of compensation for in-contact pigs should be increased to full market value; thinks amount for diseased pigs might be cut down to a third or quarter of the full value, 5512–3, 5581–8. With vigorous action witness thinks swine fever could be stamped out in a year, 5519. Attaches, however, the greatest importance to the staff, as it depends infinitely more on the men ap-

TENNANT, MAJOR JOHN TRENCHARD—*cont.*

pointed than on anything else, 5519–27. Class of man wanted, 5523–4, 5589–90, 5701–6. Would not appoint any of the permanent officials to the staff, 5521, 5589, 5696–5701. Would not apply a large area in case of one outbreak, 5528. In the majority of cases, burial of the carcase is best, 5537–41. Slaughter should not be absolutely compulsory on the central authority, as it tends to make people careless. In some cases it would be advisable to shut up premises and let the owner slaughter or let the pigs die, 5546–7, 5560–2, 5565–8, 5599, 5633. In dealing with pleuro-pneumonia the cattle trade from Ireland was not stopped, as the disease was practically confined to Dublin, 5549–50, 5689–92. Stoppage of pig trade from Ireland would mean ruin to certain dealers, 5551, 5670. It would cause immense dislocation of trade, but the consumer probably would not suffer, 5552, 5673. The objection to compulsory slaughter did not apply to pleuro-pneumonia, as owners could not get the disease except from a diseased animal, 5561–2. It would not be safe to estimate for fewer than 7,000 outbreaks in the first year, 5572–4, 5609. No doubt many might be spurious cases, but even these would entail a certain amount of expense, 5575. The general drift of the pig trade is from west to east, 5467, 5594, 5619–25, 5715–9. Everything should be done to conciliate local opinion, short of weakening the powers of the Board's decision as to their course of action, 5642. Anomalies must always exist in any boundaries selected for areas, 5643–6. Case quoted, which occurred in Midlothian when it was scheduled, and the reasons why the county was scheduled, 5647–50, 5707–9. The Board have always wished to give all information to local authorities; an oversight in this respect may have occurred during the foot-and-mouth outbreak, owing to over pressure, 5651. Ireland has always co-operated cordially with England, 5652–3, 5684. The police in Ireland, no doubt, would be of valuable assistance in carrying out the Act, 5654–5. Although pigs are examined and licensed at the Irish ports, thinks it would be difficult to trace them back to their original owners, 5656–61.

TREADWELL, JOHN (Analysis of his Evidence):

Is a member of the Executive Committee of Buckinghamshire, 3231–4. Is a dairy farmer and breeder of pigs, 3232, 3290–2. In his county they are scarcely ever free from swine fever, 3235. At one time they killed and compensated, 3236, 3330. They stopped compensating previous to 1889, as it was expensive, and because the disease was re-introduced from counties that did not kill and compensate, 3236–9, 3249, 3331–2. They suffered most from Oxfordshire and Bedfordshire, 3240. The authorities of the county and borough of Bedford have been very lax; the county is a hot-bed of disease, 3240–4, 3247, 3303–4. In Bucks they have more cases now than they have had for some time, 3245. Their regulations against Bedfordshire are evaded, 3246, 3250, 3305, 3318–9. This is the only county they prohibit movement from, 3317. They tried to get uniformity of regulations with the neighbouring counties, but Bedfordshire thwarted them, 3247, 3294–5. Buckinghamshire is a long, narrow county, and the boundaries are difficult to watch, 3248–9, 3333–4, 3349–52. Does not complain of the transit of pigs by railway, 3251–4. Wycombe is their only borough, and has not given any trouble to speak of, 3255–7, 3322–3. Want of uniformity on the part of authorities has a good deal to do with the spread of the disease, 3258–9, 3332–6. Swine fever should be dealt with by the Board of Agriculture, 3259. Until compulsory slaughter and compensation is handed over to a central authority the disease will never be got rid of, 3260, 3278–9, 3293–4, 3302, 3329. It would be necessary to employ the local inspectors, 3261, 3280–6. The cost of dealing with the matter should be out of national funds, 3262–3. It would not be possible or desirable to compel pig-keepers to take out a license, 3264–70, 3298. Is satisfied with the present maximum of compensation, but it is quite low enough, 3272–4. They have found that stopping the markets is a means of getting rid of the disease, 3275, 3301. In Buckinghamshire they have an Order to use the half-mile circles for infected places; these circles can be contracted to a radius of not less than 100 yards, 3276, 3359–61. Is decidedly of the opinion that swine fever can be stamped out, 3277–8, 3289, 3300. The

TREADWELL, JOHN—*cont.*

local inspectors would be paid by the local authority, but when employed by the Board of Agriculture would be paid by them for their work, 3284–8. The Board should send down some one to superintend the carrying out of the regulations, 3283. Witness has had swine fever on his farm, 3292, 3307–9, 3324–8. Not so many pigs are kept now in Bucks as formerly, but those who do keep them are interested in the matter, and would be glad to have the disease stamped out, 3296. They always try to trace an outbreak to its source, 3297. Dealers' premises and carts are a fruitful source of the disease, 3297. It would be a very good thing to license dealers and inspect their premises, 3299, 3305–6. Attaches importance to restriction on movement, 3301–2. Knows one case of swine fever where the pigs dropped dead one at a time without showing any ailment, 3310–11, 3341–7. This was a unique case, 3348. Would prefer having premises inspected by veterinary surgeons rather than by the police, 3312–14. The Aylesbury Dairy Company keep pigs, but has not heard of their having had swine fever, 3315–6. The police in his county prosecute for offences against the Order whenever they think they can get a conviction, 3320–1. Berkshire has always behaved well to them, 3334. They have no sub-committee in Bucks, 3337–8. They have eight or ten local veterinary inspectors and one chief inspector, 3339–40. There ought to be an infected circle of at least half a mile round every infected place, 3353–61.

TREATMENT, MEDICINAL. *Duguid* 139, 410–11; *Walley* 791, 1018–9; *Cunningham* 1916–21; *Carroll* 2707–9; *Hedley* 2970; *Axe* 3511–4; *Crofts* 4963, 4974–5.

TUBERCULOSIS. *Sanders Spencer* 630–1; *Walley* 928–33; *Cunningham* 1813, 1849–53, 1864–5, 1941–6, 1994–8, 2143; *Carroll* 2714; *Axe* 3491; *Stephenson* 5272.

TYPHOID FEVER OF SWINE. *Duguid* 3, 137–8, 467; *Axe* 3500.

URTICARIA (NETTLE RASH.) *Walley* 845, 964–8; *Prentice* 3225; *Stephenson* 5272.

WALLEY, PROFESSOR THOMAS. (Analysis of his Evidence):

Is head of Dick's Veterinary College, Edinburgh, 764–6. Earliest experience of swine fever was near Liverpool in 1865, 767. Earliest experience of it in Edinburgh about 1872, 768, 770. Since 1878 has acted as inspector for the local authority, 769. Quotes cases which have occurred in Edinburgh, 770, 781, 860, 876–84, 945–51, 969–73, 1051–5. Large outbreak at Dalry in 1885, 770, 781, 793–805, 822, 958–60, 1051–5. Attributes the prolongation of outbreaks at Dalry to the filthy condition and arrangement of the piggeries, 771–2, 960. A good many of the piggeries have been swept away, 773–4. Sanitary authority had no power over the matter as no dwellings were near, 774. Quotes a case of swine fever near Stranraer, 775–80, 1086–9. Measures adopted to stamp out the disease in the outbreak at Morningside Asylum, 782, 806–16, 822, 876. Is satisfied that the woodwork of the piggeries at the Morningside Asylum were contaminated with the virus, and tended to keep up the disease, 785, 879. The disease was also perpetuated by young pigs left alive, 786. Nearly all the pigs at Morningside Asylum were bred on the premises, 816. Manifestations of the disease, 787, 886–933, 1027, 1056–76. Has seen hundreds of cases where there were no skin lesions, and also many cases where there were skin lesions and no internal lesions, 787, 853, 886–94, 1056–76. Pigs affected with swine fever *in utero*, 787. Methods by which the disease is spread, 788, 974. By the breaking up of old lung lesions and bowel lesions, so-called recovered pigs may spread the disease, 788, 991–2. These recovered animals are most dangerous, 788–9. They should be slaughtered, 790, 910, 938. If treated medicinally about 50 per cent. of diseased animals recover, 791, 991–2, 1014–16, 1049–50. If not treated from 80 to 85 per cent. would die, 791–2, 909, 1017. Every in-contact animal should be slaughtered 816–17, 884–5,

WALLEY, PROFESSOR THOMAS—*cont.*

938, 1025–6. Would not suspect every animal which was in-contact, 1026. Restriction of movement should be placed on every animal within at least a quarter of a mile from an infected place, 818–20. Quotes a case at Falkirk, 821, 995–7. If proper sanitary regulations were insisted upon there would be less trouble in dealing with swine fever, 822–5, 913. There should be preventive as well as suppressive measures, 823. All pig owners should be licensed, 825–31, 1029–32, 1046–8. In Edinburgh, a piggery is not allowed within 50 yards of a dwelling-house, 831–3. All badly constructed piggeries should be swept away, 831–5. As they are injurious to health of human beings and animals, 838–9. This should be done at the expense of the community at large, 836. Pigs are not allowed to be kept in any dairy byres in Edinburgh, 840–2. The term "swine fever" is misleading; would substitute the term "swine plague," and include under this, swine erysipelas, 843, 944, 962, 1010, 1077–81. Many veterinary inspectors do not know swine fever, 844. Salt poisoning, strongyles and nettle rash are often mistaken for swine fever, 845–8, 853, 923–7. Thinks woodwork may be rendered harmless by painting with gas tar or saturating with creosote, 857, 998–1000. Flooring and walls of pigsties should be made impervious, 857, 952–6. The bulk of the pigs in piggeries about Edinburgh are bred on the premises, 861–5. In certain districts when swine fever broke out, the owner slaughtered the diseased animals and dispersed the remainder by means of a dealer, 866–70. Has no proof that this is done now, 870. It should be made illegal for an owner to slaughter animals suspected of swine fever, 871, 1003–5. In many cases there is very little difference between *post-mortem* lesions of swine fever and swine erysipelas, 900–8. Has seen dozens of cases of tuberculosis in pigs, 928–33. Thinks cost of slaughter should be an Imperial question, 934–38. Diagnosis of suspected cases should be done by central authority as in pleuro-pneumonia, 939. The bowels, lungs, skin (if there are lesions on it), and the lymphatic gland of the bowels and lungs, should be sent for diagnosis, 941. Thinks there would be little risk of infection, in sending these, if properly packed, 942–3. Swine erysipelas and "rouget" are the same, 961, 1083. The lesions of swine fever and swine erysipelas are very similar, 962–3, 1012–3, 1080. Nettle-rash is not fatal or infectious, 964–8. Boar-keepers, especially itinerant ones, should be registered, 975–7. In-and-in breeding liable to make pigs less able to withstand the disease, 978–80. The time of year has nothing to do with the outbreaks of disease, 981. It spreads more in thundery and murky weather, 982–6. Poor conditioned pigs most readily take the disease, 987–90. Approves of disinfection, 957, 993. The local authority might pay for disinfection, 994. Vital power of the germ may last some months in dirt, 1001–2. No risk in conveying diseased pigs to slaughter-house in a well-limed float, 1006. The carcases are boiled down at the slaughter-house, 1008–9. Medicinal treatment for swine fever, 1018–19. It is difficult to trace the origin of outbreaks in Edinburgh, 1020. No pigs, except a few surplus stores, are landed at Leith, 1022–3. Regards public markets and marts as a source of danger, 1028. Thinks there has been a vast amount of concealment of swine fever, 1034. If compensation were given, people would be more likely to report, 1035. Would increase maximum for in-contact pigs to 6*l.*, and give three-fourths for diseased pigs if the owner reports, 1036–45. Inspectors may examine all pigs shipped from Ireland, and not detect swine fever in some cases, 1090.

WOOD, REV. LEONARD CHARLES (Analysis of his Evidence):

Chairman of Executive Committee, Lancashire, 4487. They have no prohibitions on movement in force now, 4488–90, 4638–41. In one or two cases they have withheld compensation, 4672. One of their great difficulties has been their inability to withhold compensation, 4491, 4667–76. Many cases have arisen where, if they had had discretionary power, they would not have paid compensation, 4491, 4538, 4599–4600. The county have always slaughtered diseased

WOOD, REV. LEONARD CHARLES—*cont.*

and in-contact pigs, and paid half compensation, 4492, 4621–6. Many of the boroughs refuse to slaughter because they have to pay compensation, 4492, 4538. There are 32 separate jurisdictions in Lancashire, 4493–9, 4619. Great difficulty has arisen from this multiplicity of jurisdiction, 4501–2, 4538, 4603–5, 4620. A large number of Irish pigs are imported into Lancashire, 4500. They had 203 outbreaks in the county in 1892, 4503. These outbreaks are traced principally to Bedford and Ireland and some from London and Fakenham, 4503–7, 4534, 4553, 4613–14, 4651–65. They have no prohibition against Bedford, 4504. The difficulty is dealers send pigs from Bedford to boroughs in Lancashire and from the boroughs they are hawked about the county, 4505, 4637. Pigs of 13 and 14 weeks old, which should be worth 30*s.* to 35*s.*, are sent from Bedford and sold at about 13*s.* and people are tempted by the lowness of the price, 4505, 4512, 4634. The inference is that the pigs are under suspicion, 4635–7. The town of Bedford is a serious centre of disease, 4507–12, 4553, 4614. Complains that they get no assistance from the Bedford police in tracing the disease to the advertising dealers, 4507, 4558. Describes the character of the Irish pig trade in Lancashire, 4514–33, 4613–8, 4649–50. There are dealers in Liverpool and Preston who distribute Irish pigs all over the county, 4515–20. If there is inspection at the ports in Ireland, it is not properly carried out, 4521–4, 4679–81 There is no inspection at the port of Fleetwood, 4525–33, 4642–4, 4690–2. It is a curious fact that no diseased pig has ever been found in the hands of a dealer, 4690. The dealers who do all the mischief get off scot free, 4534, 4603–4. They should be licensed and under control, his committee recommended this to the Board of Agriculture, 4534, 4565–6, 4579–80, 4645–7. His committee also recommended that power should be given them to control the importation of pigs from Ireland, 4534. At present they cannot restrict movement from Ireland, 4535–7, 4539–40. Last year his committee recommended that, either further powers should be given to the County Council or that the Board of Agriculture should take over the whole control and expense, 4538, 4579–82, 4611, 4648. Want of uniformity of action between the county and boroughs is their great difficulty, 4538, 4603. There is a great deal of reckless trading, 4538, 4600. Thinks the present limit of compensation is quite sufficient, 4542–3. The farmers, however, are appealing strongly for full compensation for diseased pigs, 4543–6. Witness thinks if this is given there would be more reckless trading than there is at present, 4546. Thinks the law with regard to sanitary conditions of pigsties, &c., is sufficient if it were enforced, but thinks the local officers are not so diligent as they might be, 4547–51. There should be a county medical officer of health in every county, 4552. There is one in Lancashire, and it is the best appointment ever made by the County Council, 4548–52. The Bedford dealers send pigs which have never been in Bedford, 4557–9. The pigs are sent in crates to small stations, 4560–1. In Lancashire they always try to trace the origin of every outbreak, 4554, 4562. Frequently 40 or 50 pigs are crowded into one truck, and they remain it two or three days, and their condition is horrible when they arrive, 4562–4. There is a large market at Preston, 4567. Lancashire is a dairy county, and more pigs are required for feeding than are bred in the county, 4568–70. There are private lairs in Preston in which probably sales take place, 4571–7. These sales might account for many of the outbreaks, 4578. His opinion is that if the local authority were armed with proper power they would be a more useful instrument in preventing swine fever than the central authority, 4583–90, 4595–6, 4609–12. There should be compulsory slaughter of both diseased and in-contact swine, 4591–2. There should be liberal compensation, 4593–4. Does not think there is any hardship in each county paying its own compensation, but every county ought to be compelled to act in uniformity with others, 4598, 4608–12. They have frequently had recurrence of disease on the same premises, 4599. Does not think there is much fraudulent concealment, 4601. Thinks swine fever can be exterminated, 4602. This can only be done by establishing some authority by which you will get uniformity of action, 4605–12. The task of

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punishing offenders is exceedingly difficult; quotes a case, 4603, 4673-6. They have imposed restrictions wherever they have found disease existing, and witness supposes these have had the effect of reducing the amount of disease, 4627-8. Swine fever diminished in 1892 in Lancashire, 4629. No diminution in swine fever was perceptible owing to foot-and mouth restrictions, 4630-2. The increase in railway rates has not had any visible effect on the pig traffic, 4633. The

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principal importation of pigs into Lancashire is in the spring, 4641-3. Return handed in of the outbreaks attributed to Ireland, 4514, 4651-65, 4677-8. Whatever measures are taken in England for stamping out swine fever, the same should be adopted in Ireland, 4666. They have veterinary inspectors in every district, but not one chief inspector, 4682-5. Is satisfied they do their work properly, 4686-7. They are paid mileage and so much per case, 4688-9.

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